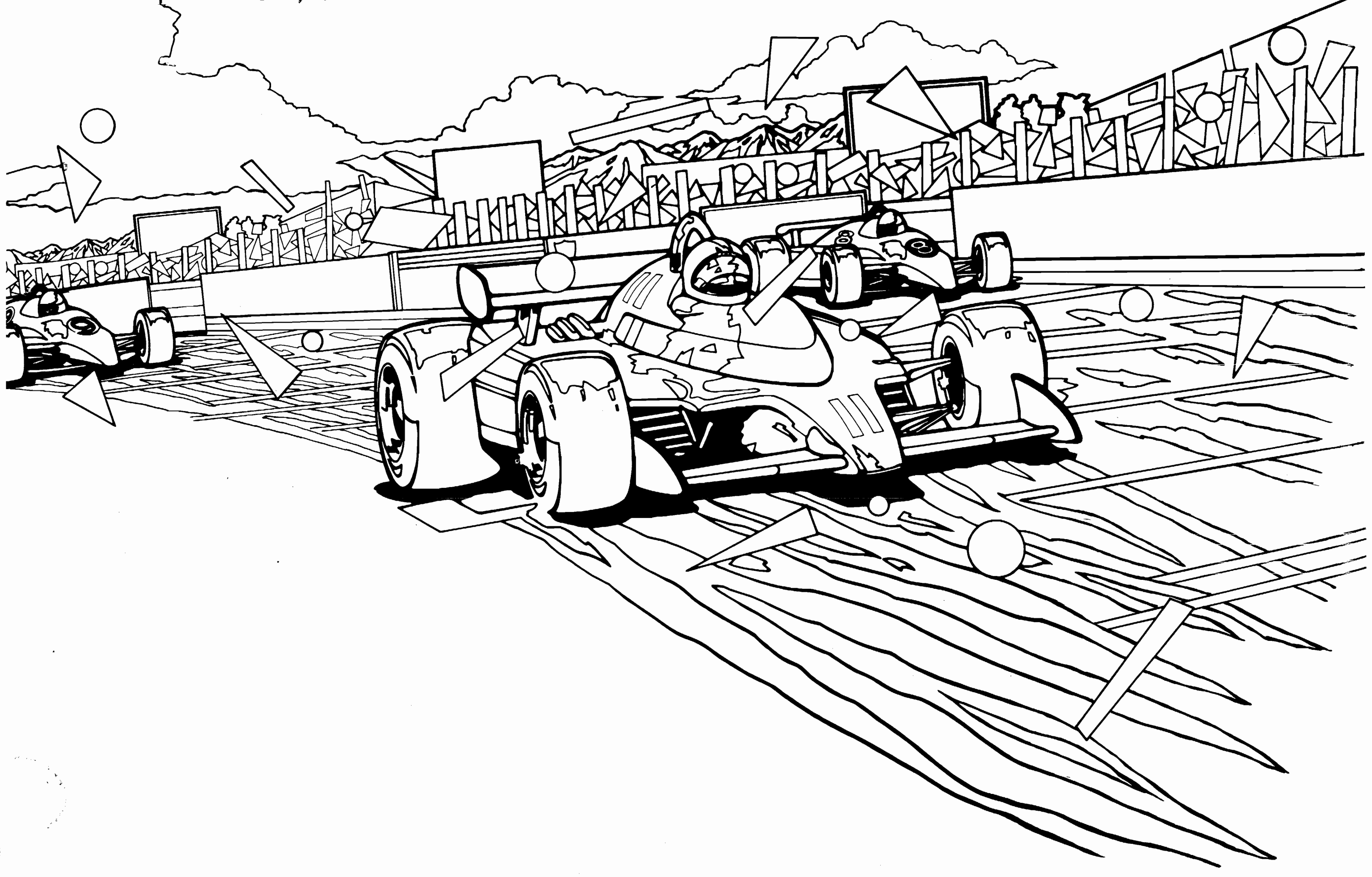
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NOTE

This staple temporarily holds the schematic package together. Remove the staple before using these schematics.

GAME FILE



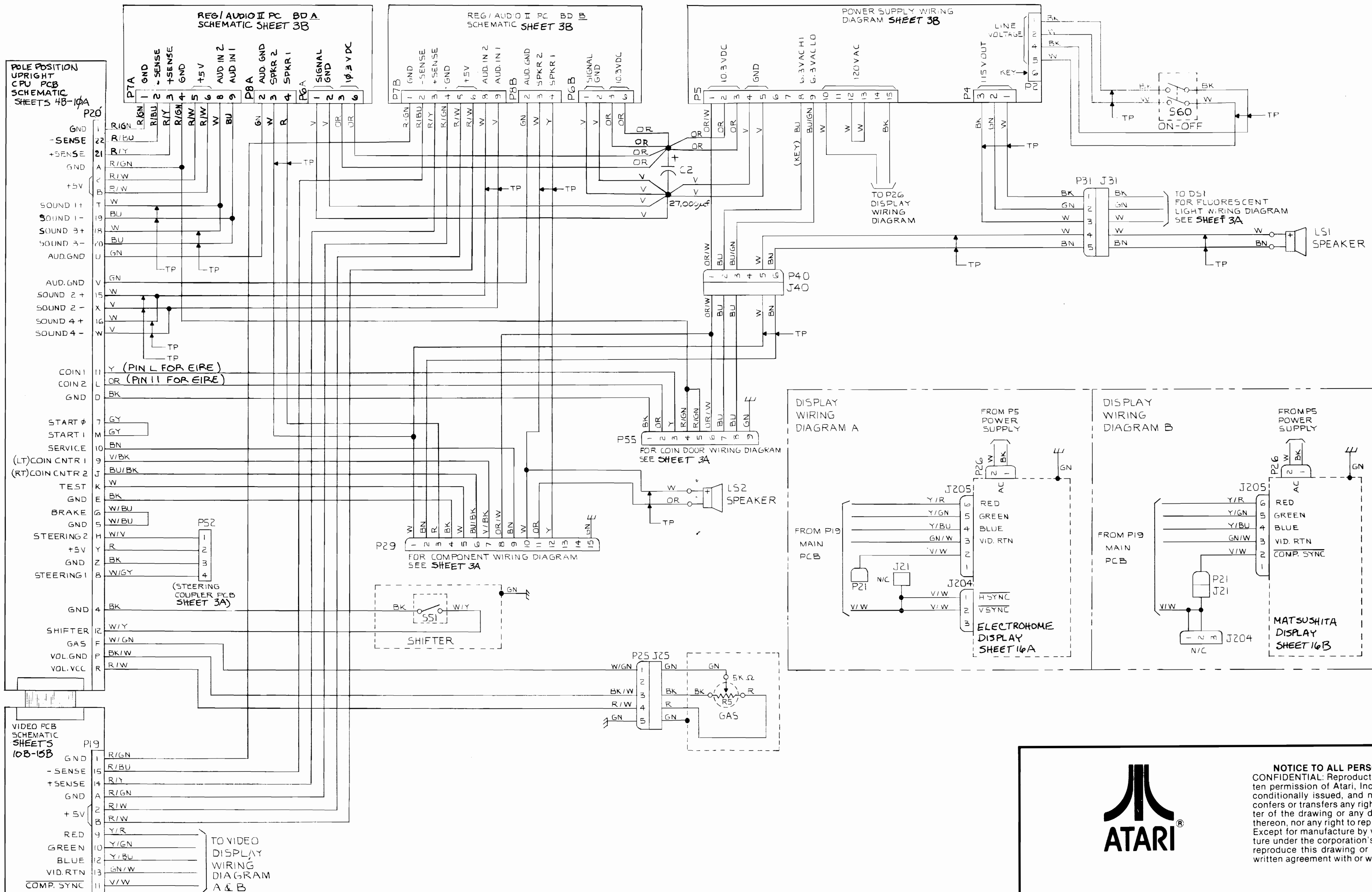
Schematic Package Supplement to

POLE POSITION™*

Operation, Maintenance, and Service Manual

*Pole Position is engineered and designed by Namco Ltd. Manufactured under license by Atari, Inc.

1M

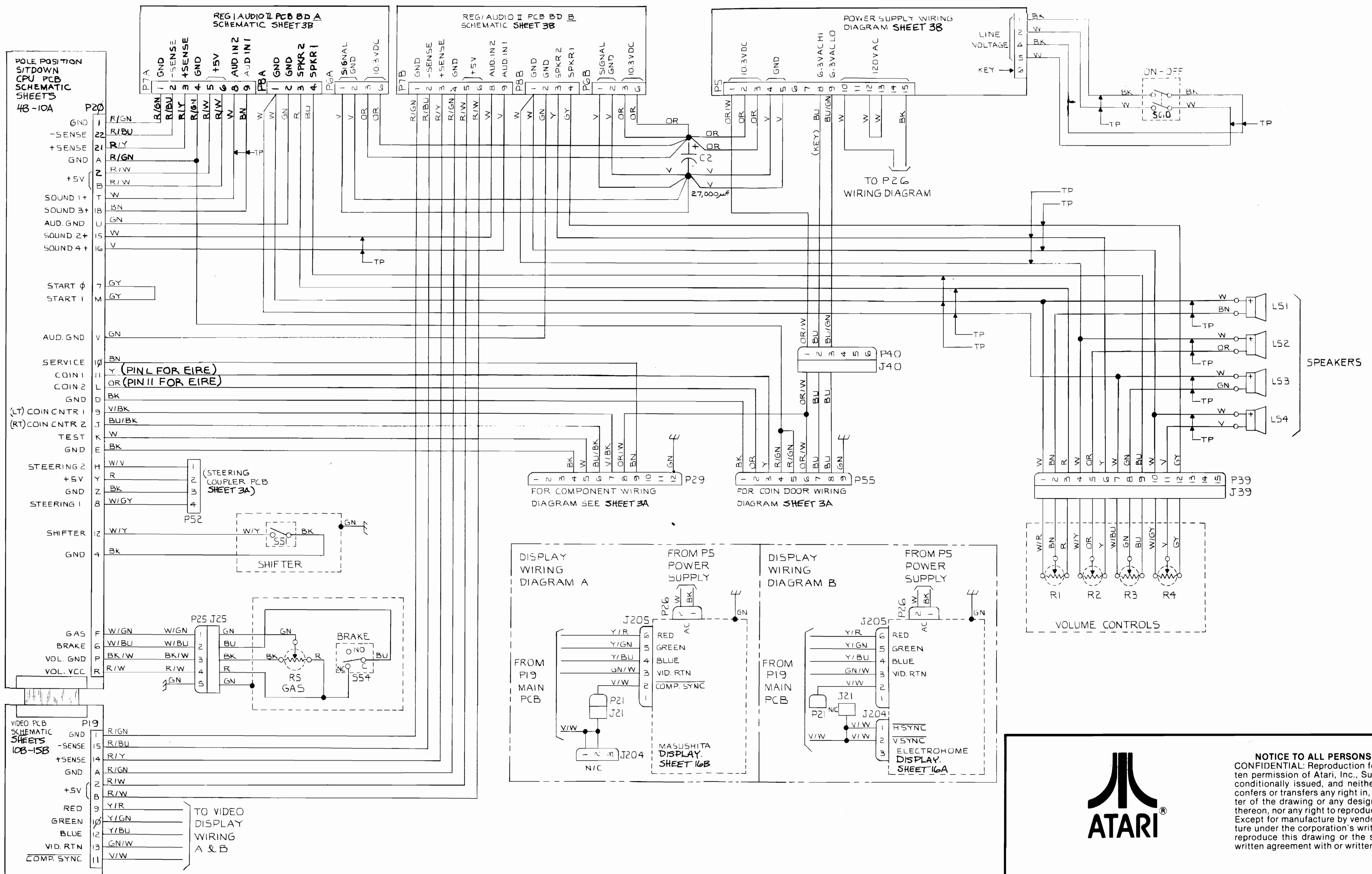


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Pole Position Upright Main Wiring Diagram

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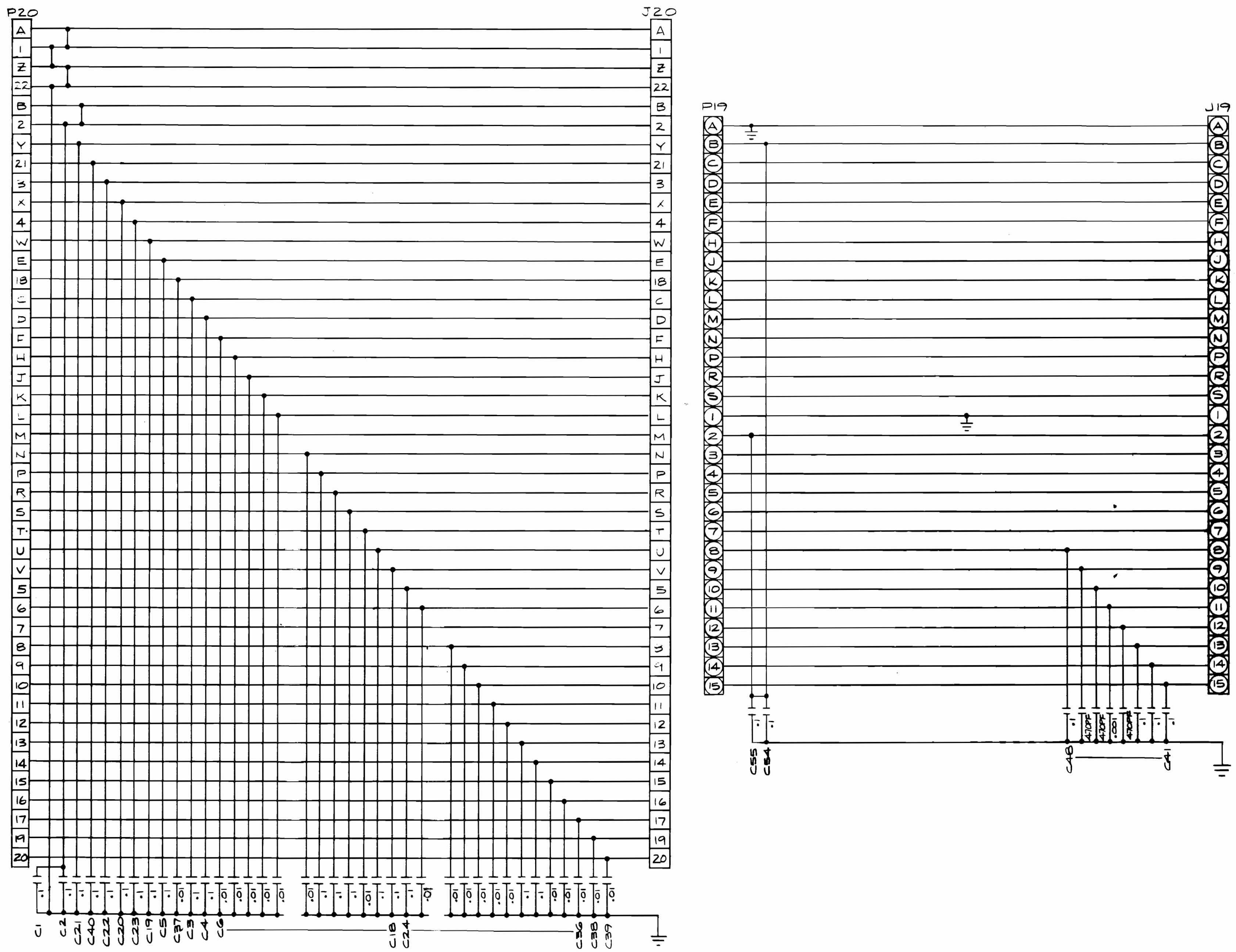
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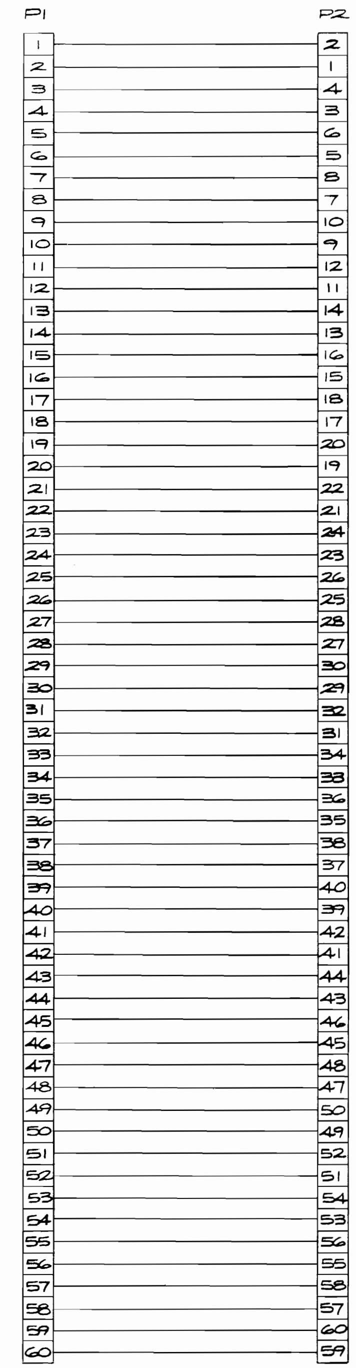
Pole Position Sit-Down Main Wiring Diagram

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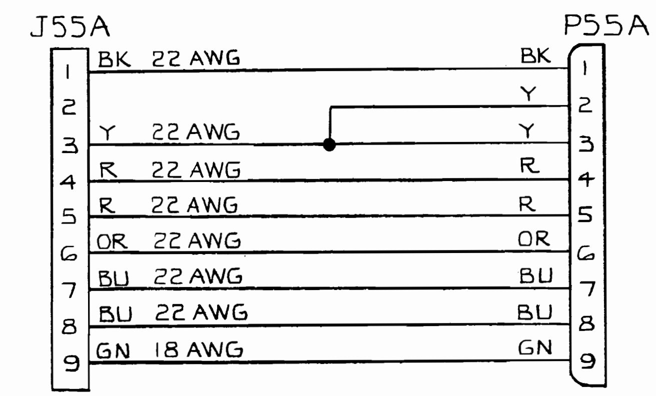
EMI Shield PCB Wiring Diagram



EMI End PCB Wiring Diagram



Coin Option Interconnect Wiring Diagram



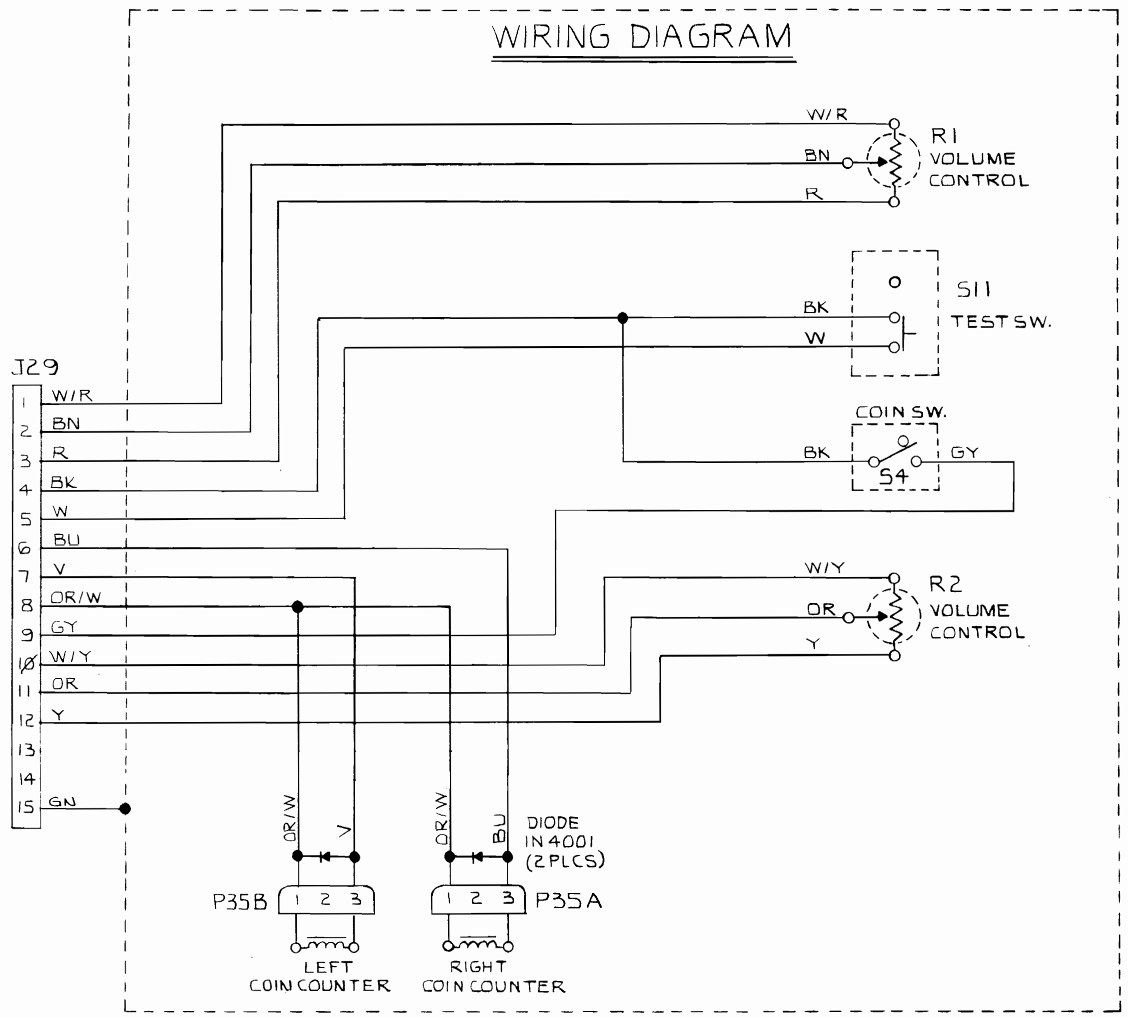
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Pole Position Game Wiring Interfaces

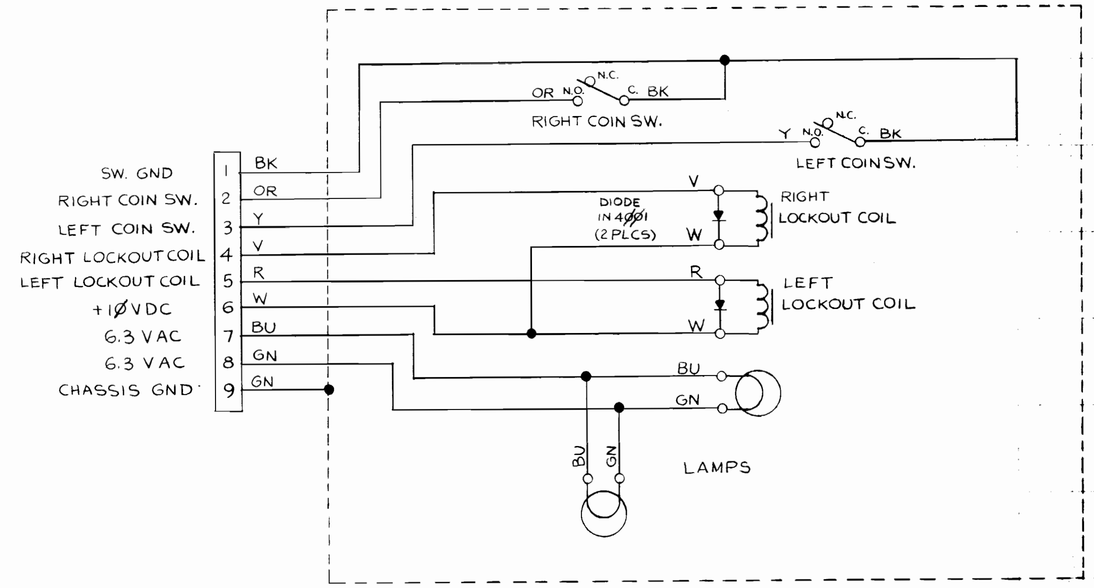
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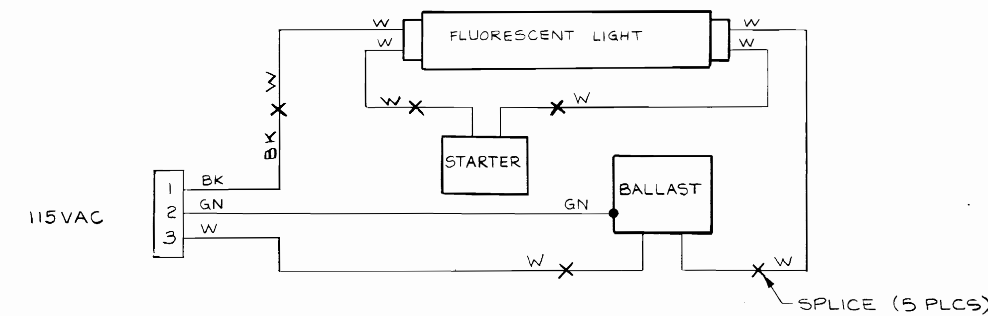
Upright Utility-Panel Wiring Diagram



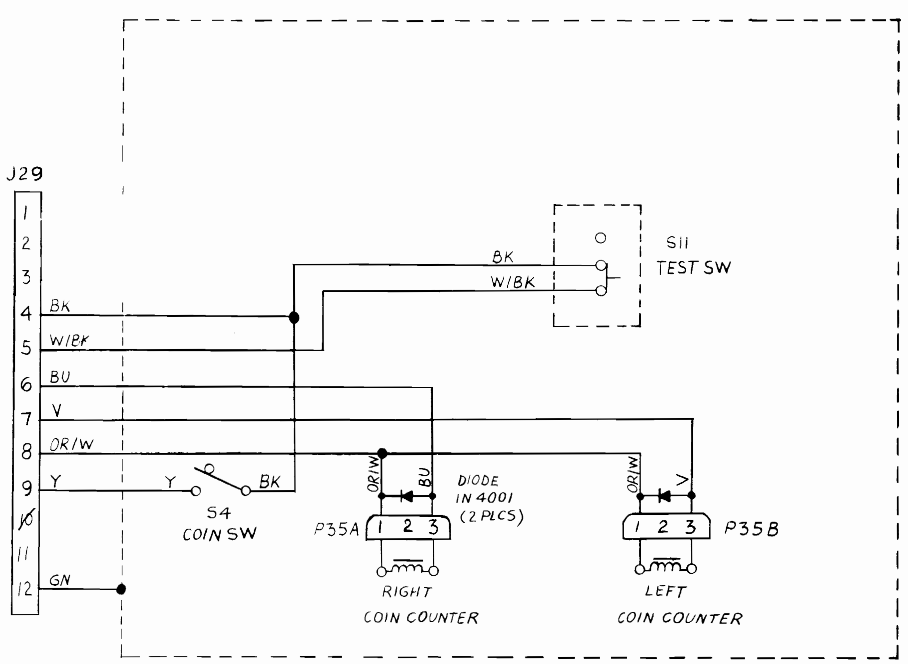
Coin-Door Wiring Diagram



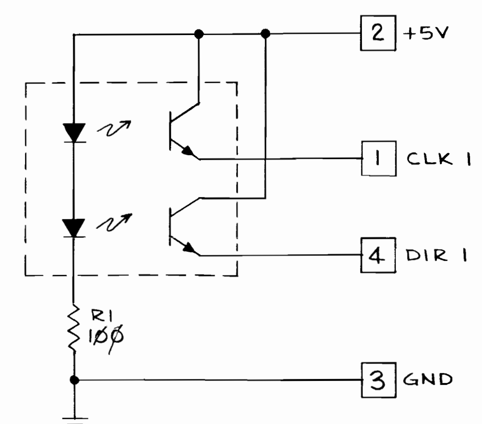
Upright-Only Fluorescent Light Wiring Diagram



Sit-Down Utility-Panel Wiring Diagram



Steering Coupler PCB Schematic



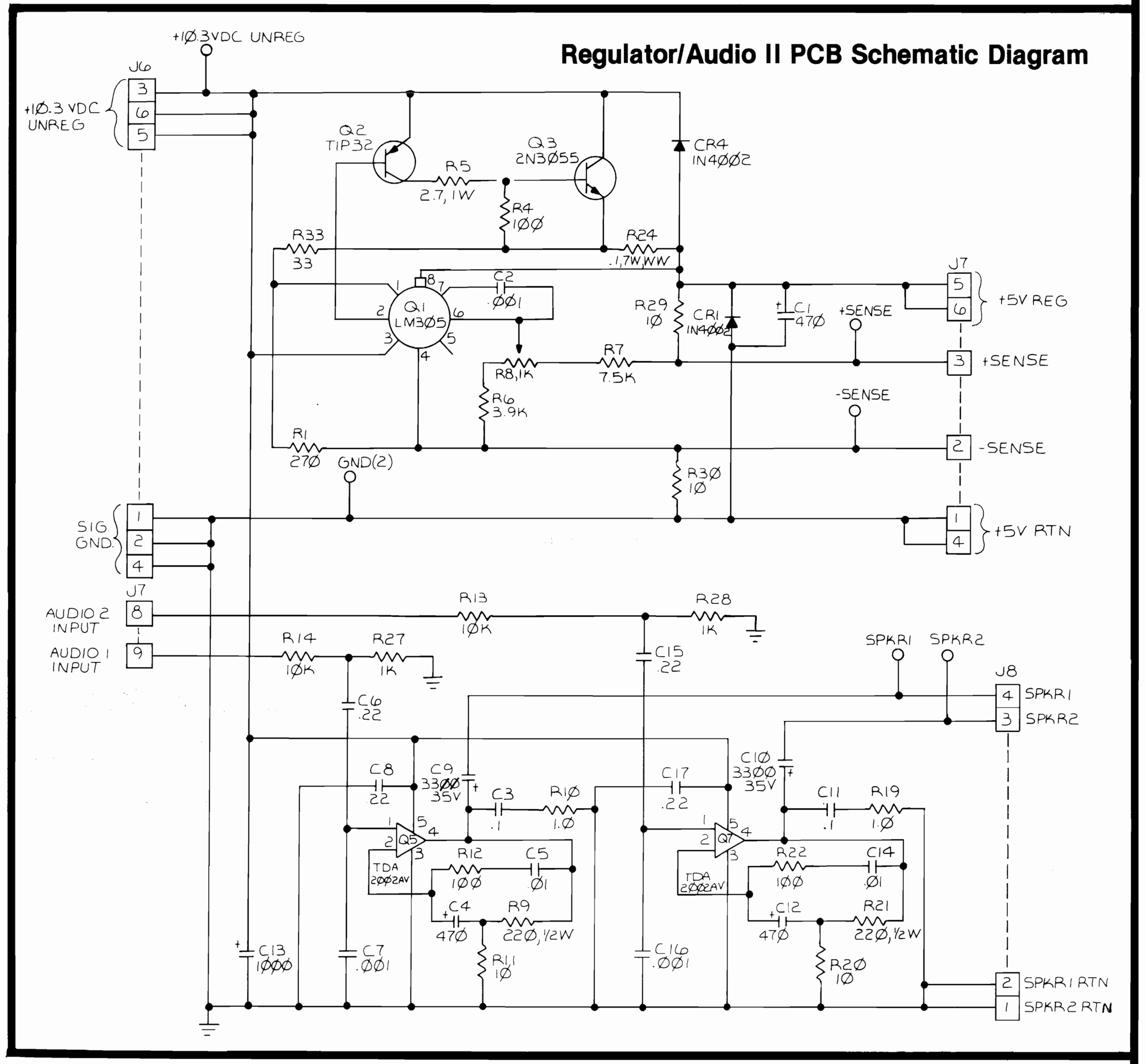
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Pole Position Game Wiring Interfaces

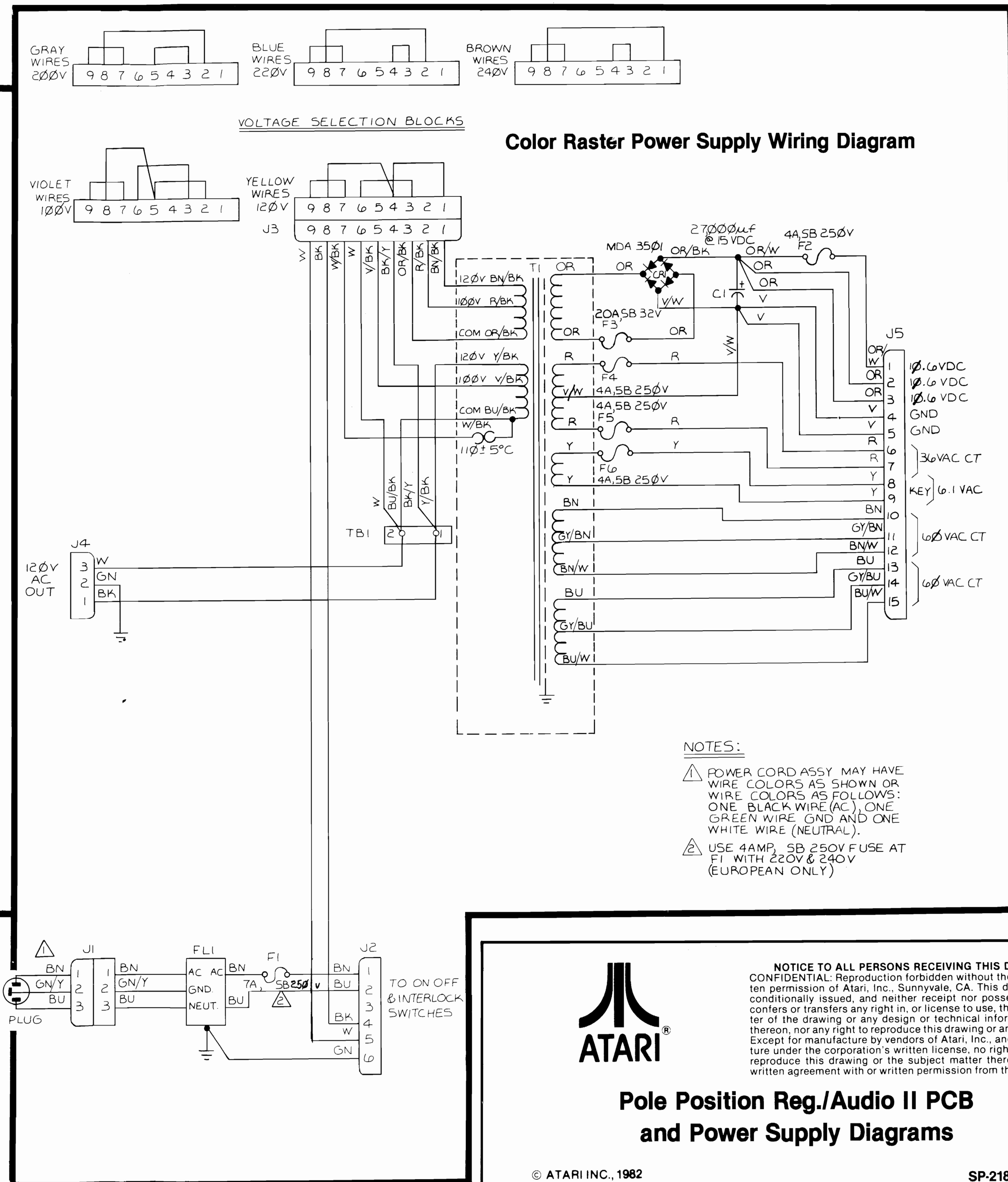
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Regulator/Audio II PCB Schematic Diagram



Color Raster Power Supply Wiring Diagram



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Pole Position Reg./Audio II PCB and Power Supply Diagrams

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4th printing

MEMORY MAP

CPU 1 AND 2

HEXADECIMAL ADDRESS	READ/ WRITE	FUNCTION
0000-37FFF 4000-7FFF	R R	Program Memory Program Memory
8000-8FFF (8700-87FF) (8F00-8FFF)	R/W	Motion Object Memory Vertical and Horizontal Position Character, Color, Vertical Size, Horizontal Size
9000-97FF (9000-93FF) (9700-97FF	R/W	Road Memory Character Horizontal Scroll
9800-9FFF A000-AFFF)	R/W R/W	Alphanumeric Memory View Character Memory
C000 C100	W W	View Horizontal Position Road Vertical Position

CPU 3

HEXADECIMAL ADDRESS	READ/ WRITE	FUNCTION
0000-1FFF 2000-2FFF 3000-37FF	R R R/W	Program Memory Program Memory Battery Back-Up RAM
4000-43FF (4380-43FF)	R/W	Motion Object Memory Vertical and Horizontal Position
4400-47FF (4780-47FF)	R/W	Motion Object Memory Character, Color, Vertical Size, Horizontal Size
4800-48FF (4800-49FF) (4B80-4BFF	R/W	Road Memory Character Horizontal Scroll
4C00-57FF (4C00-4FFF) (5000-53FF)	R/W	Alphanumeric Memory Alphanumeric View Character
8000-83FF (83C0-83FF)	R/W	Sound Memory Sound
9000 A000	R/W R/W	4-Bit CPU Controller Input/Output
A000	W R	IRQ Enable (1 = enable, 0 = disable) Bit 0: Not Used Bit 1: 128 V Bit 2: Power-Line Sense Bit 3: ADC End Flag
A001 A002 A003 A004 A005 A006 S007	W W W W W W W	4-Bit CPU Enable Sound Enable ADC Input Select CPU 1 Enable CPU 2 Enable Start Switch Color Enable
A100 A200 A300	W W W	Watchdog Reset Car Sound (Lower Nybble) Car Sound (Upper Nybble)

Schematic Reference Designators and Symbols

Logic symbols depict the logic function performed by that particular device and may differ from the manufacturer's data.

REFERENCE DESIGNATORS:

C Capacitor
CR Diode, signal or rectifier
F Fuse
J Connector

L Inductor, fixed or variable
LS Speaker
P Connector
Q Transistor or silicon-controlled rectifier

R Resistor, fixed or variable
S Switch
T Transformer
TP Twisted wire pair

VR Voltage regulator
Y Crystal

WIRE COLORS:

R Red
GN Green
Y Yellow
W White

BU Blue
BN Brown
BK Black
OR Orange

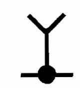
V Violet
GY Gray

Electrical components shown on the schematic diagrams are in the following units unless otherwise noted:

Capacitors = microfarads (μf)
Resistors = ohms (Ω)
Inductors = microhenrys (μh)

SYMBOLS:


Ground


Test Point

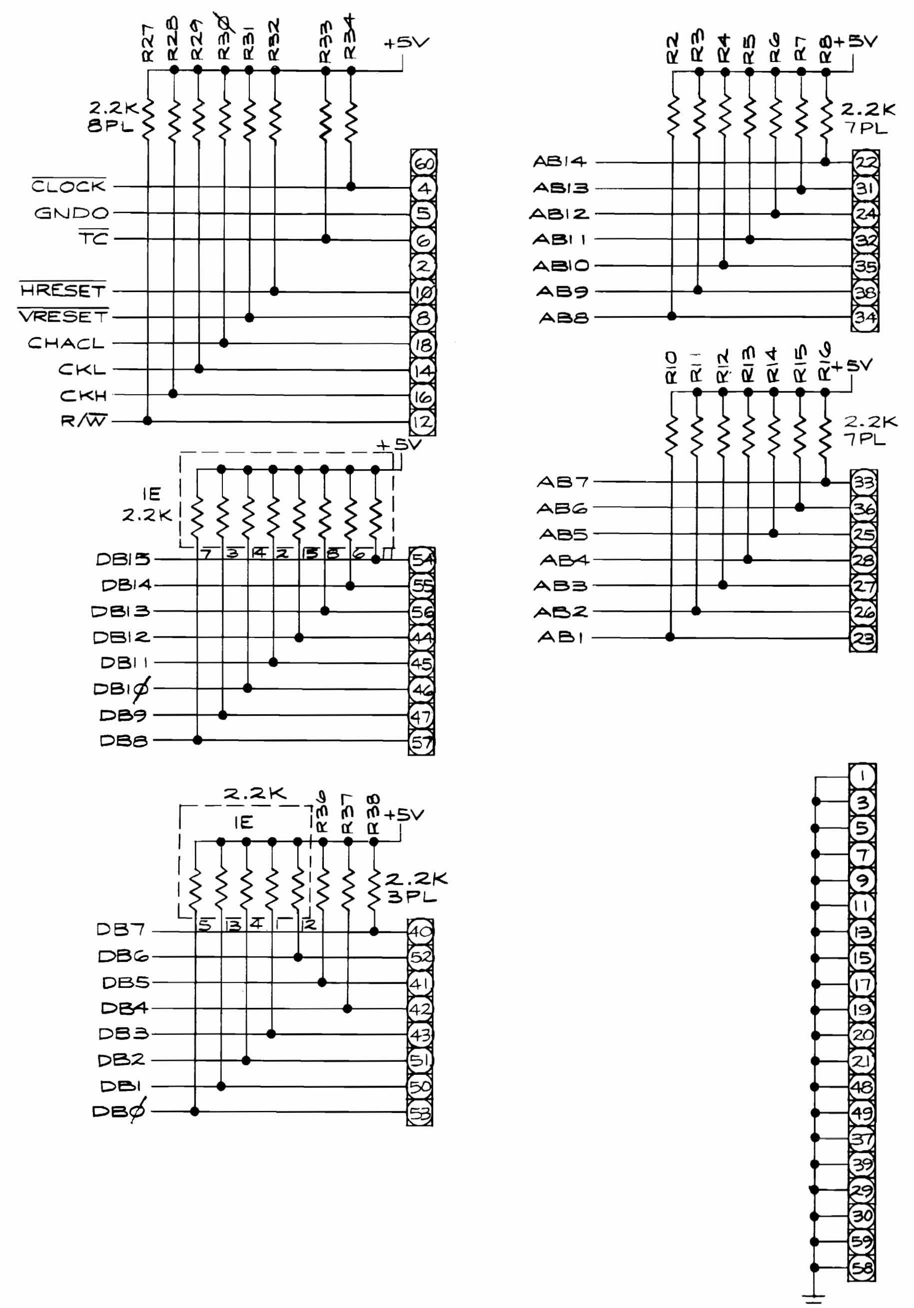

PCB edge connector pad

Pole Position Memory Map and Schematic Notes

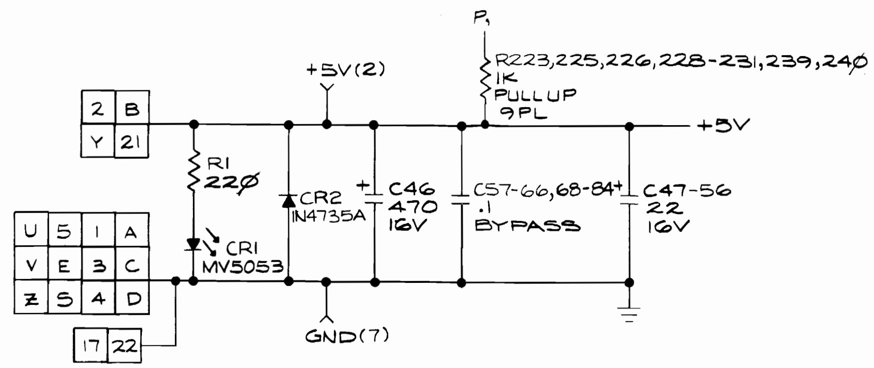
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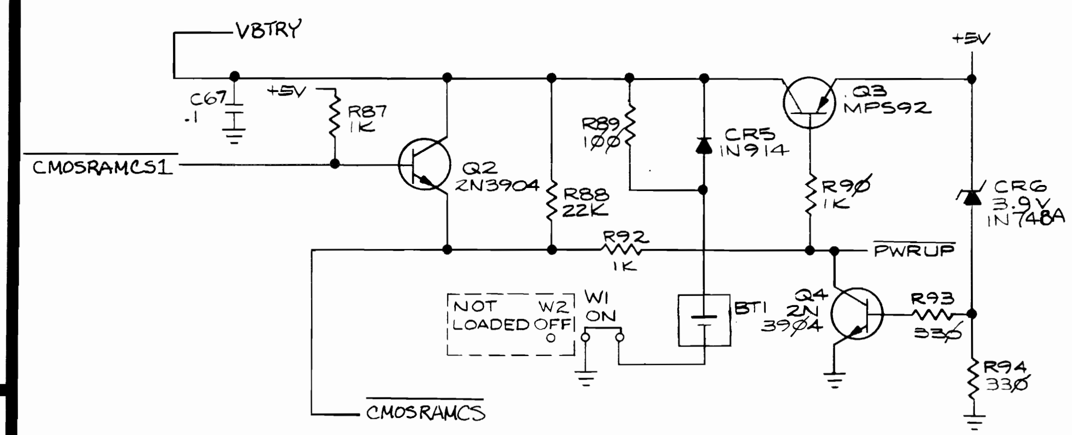
CPU PCB Edge Connector



CPU PCB Power Input



RAM Battery Back-Up Power



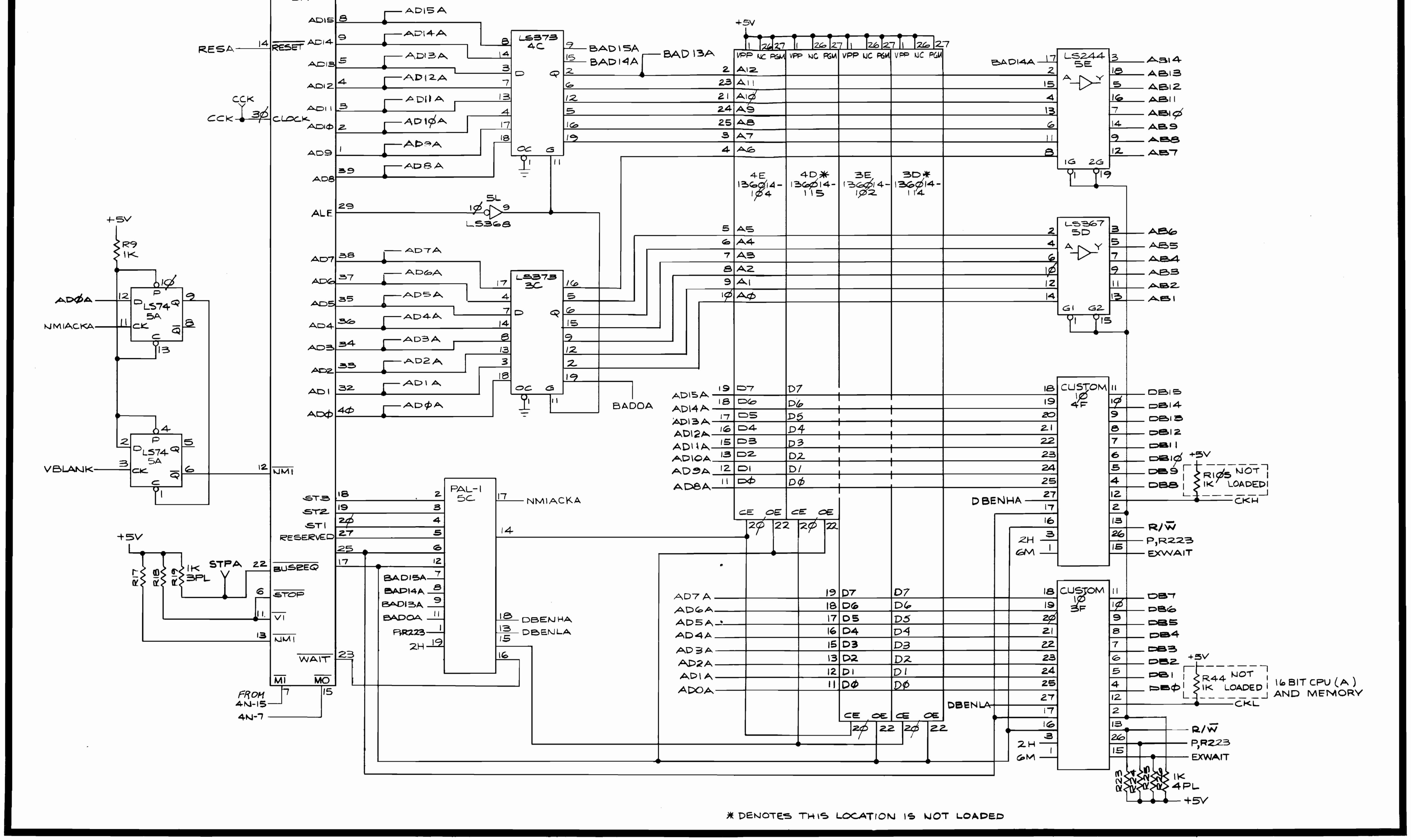
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Pole Position CPU PCB Schematic Diagram

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Microprocessor A



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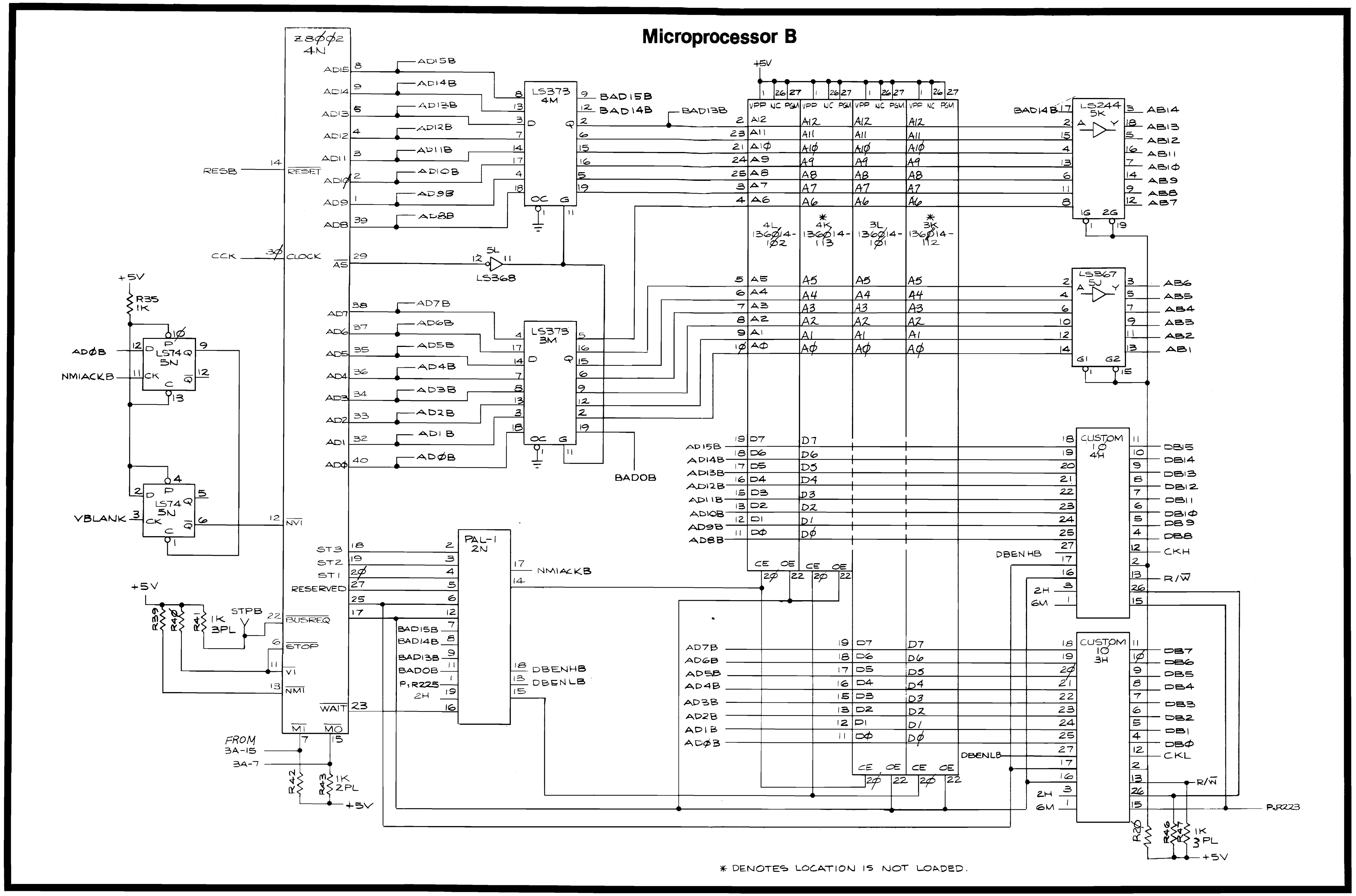
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Pole Position CPU PCB Schematic Diagram

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SP-218 Sheet 5A

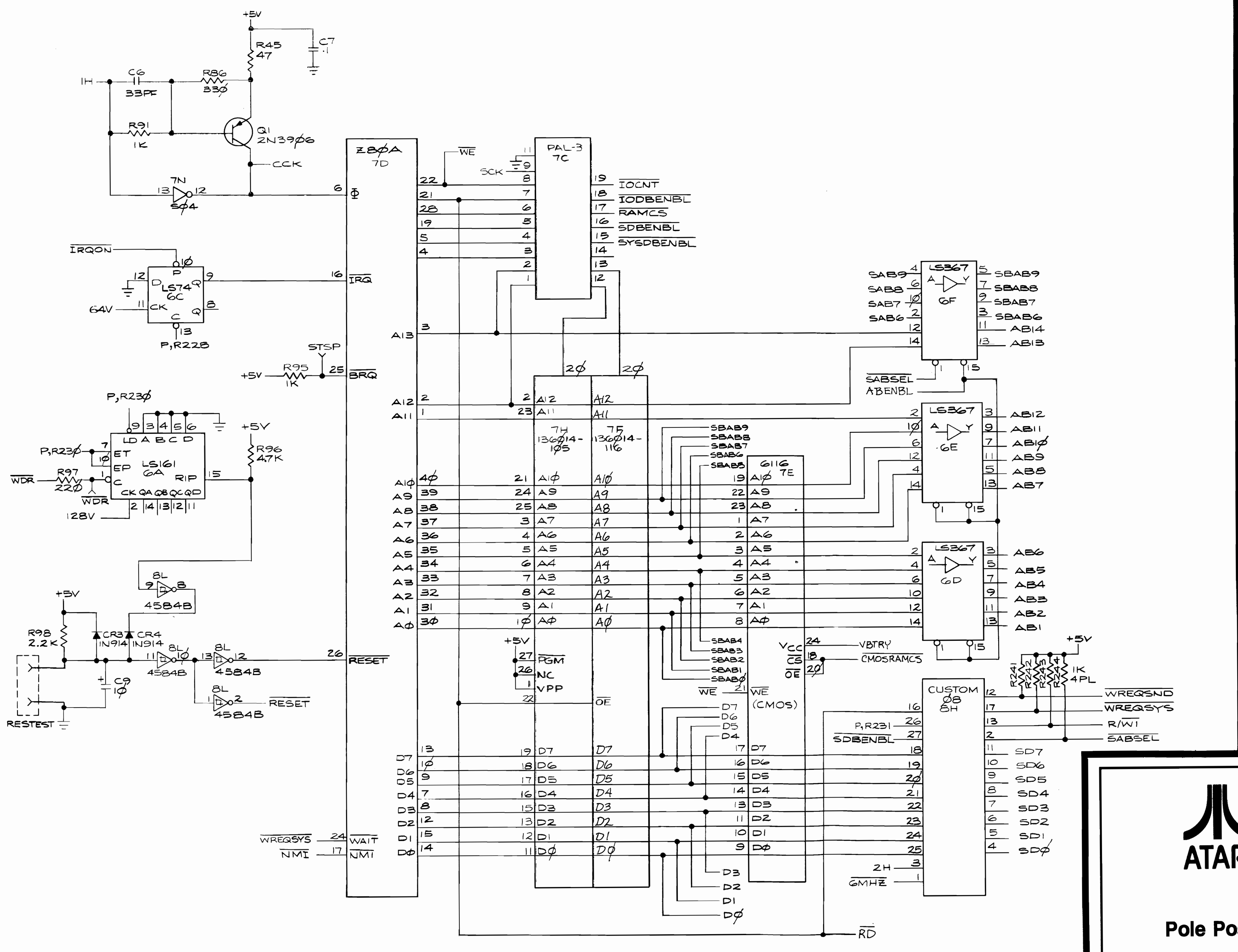
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Pole Position CPU PCB Schematic Diagram

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Sound Microprocessor



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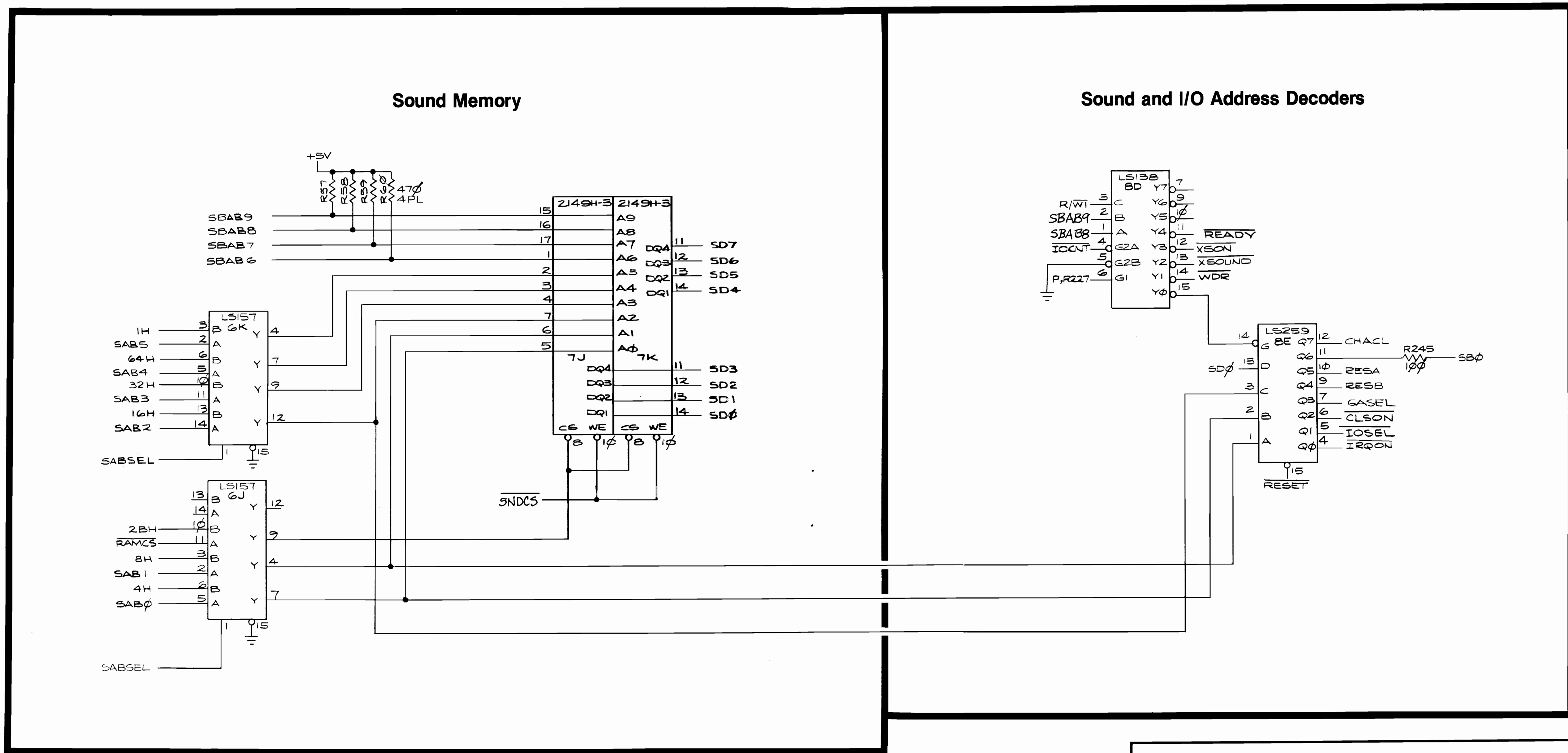
Pole Position CPU PCB Schematic Diagram

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Sound Memory

Sound and I/O Address Decoders



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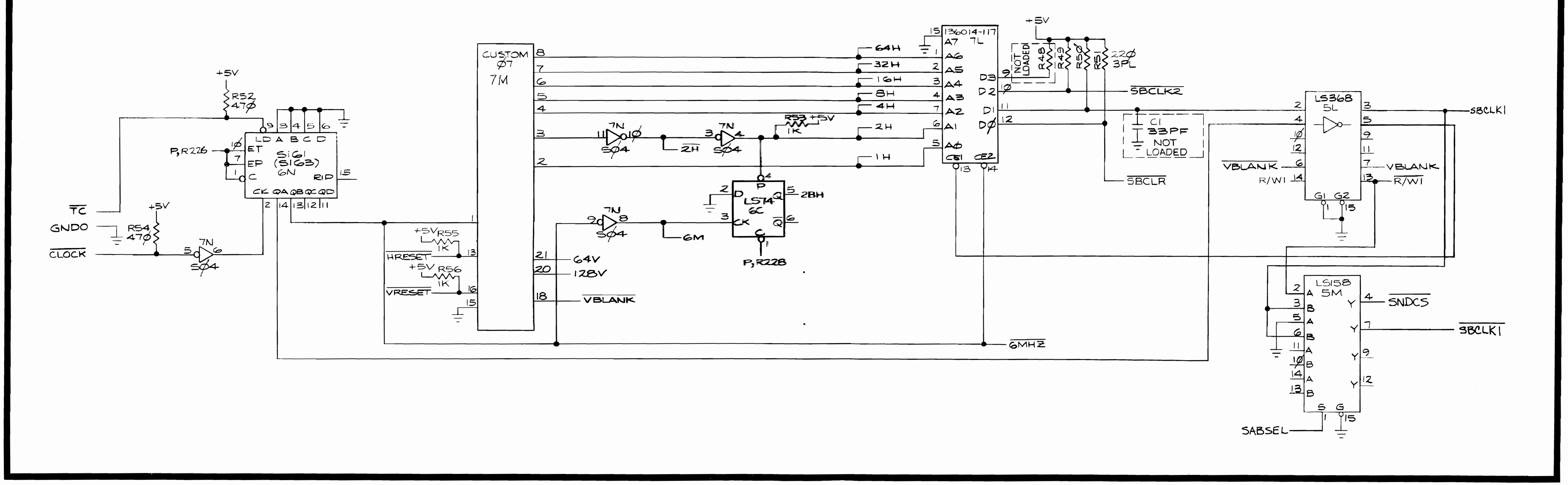
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Pole Position CPU PCB Schematic Diagram

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CPU PCB Sync Chain

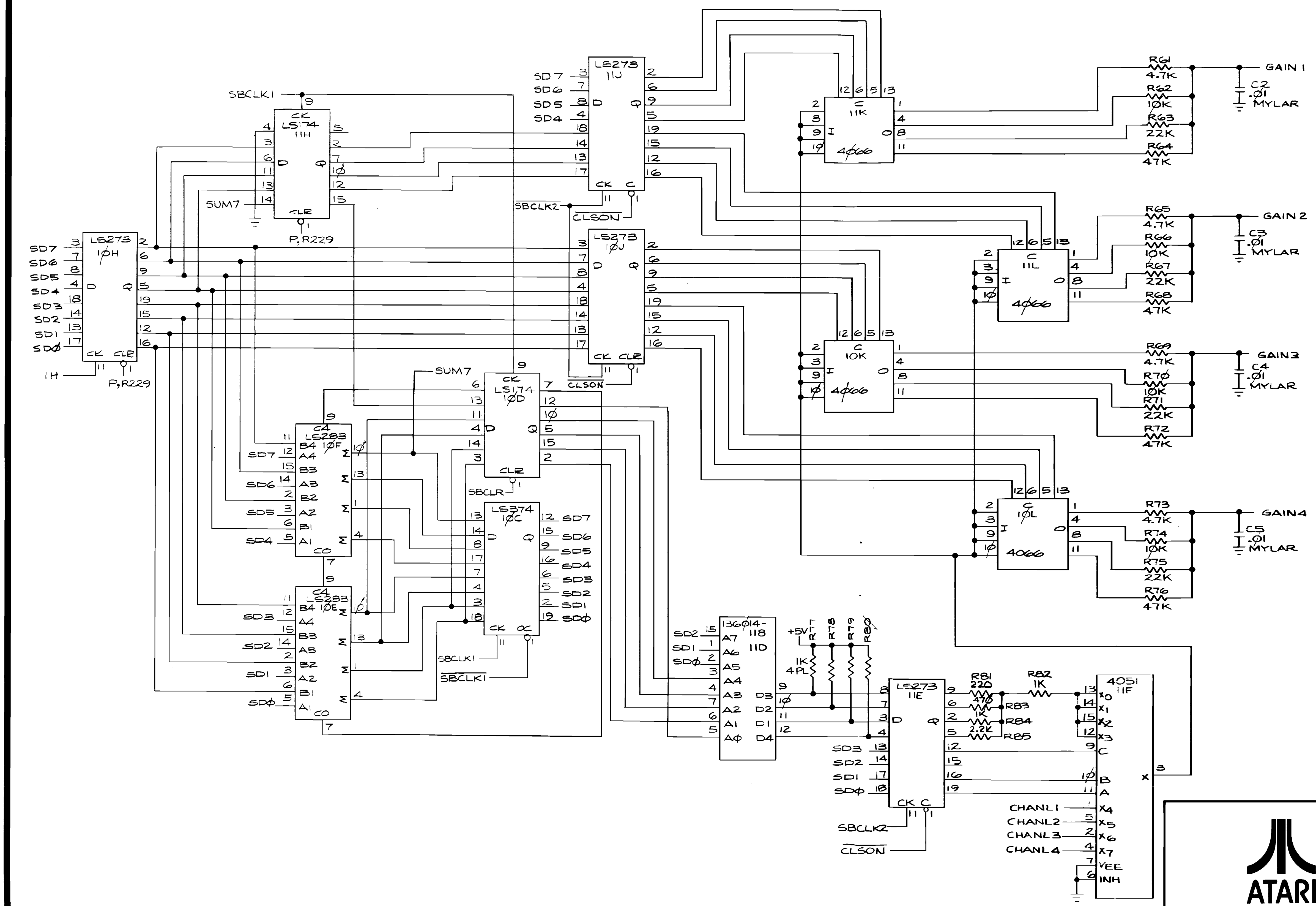


Pole Position CPU PCB Schematic Diagram

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Sound Buffers and Multiplexer



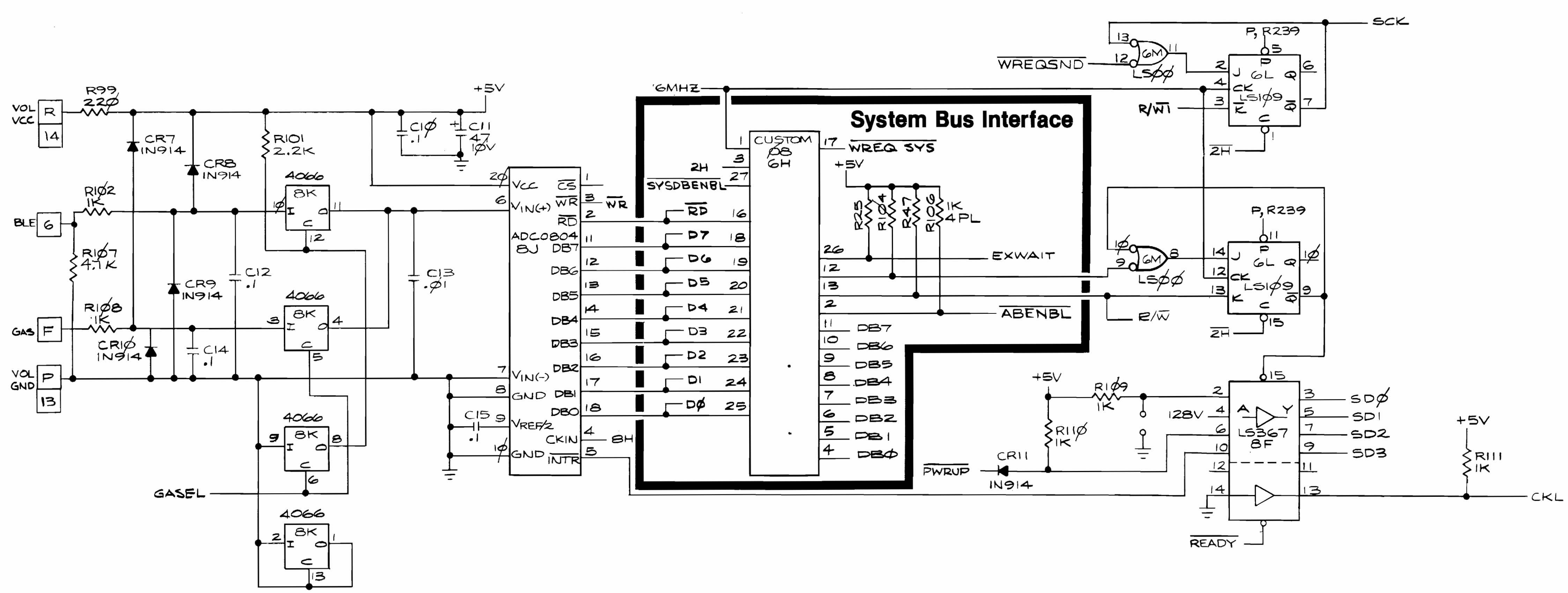
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Pole Position CPU PCB Schematic Diagram

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Brake and Gas Pedal Input



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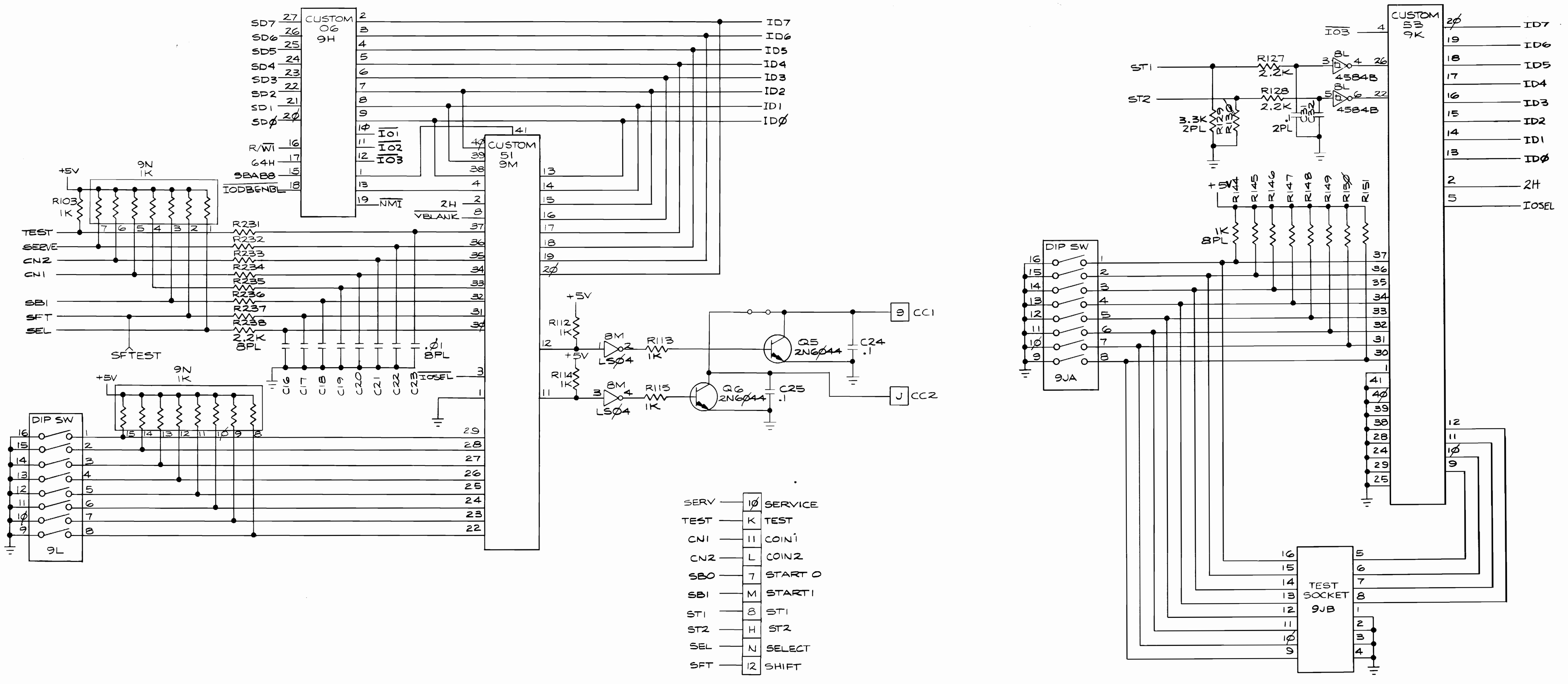
Pole Position CPU PCB Schematic Diagram

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SP-218 Sheet 8A

4th printing

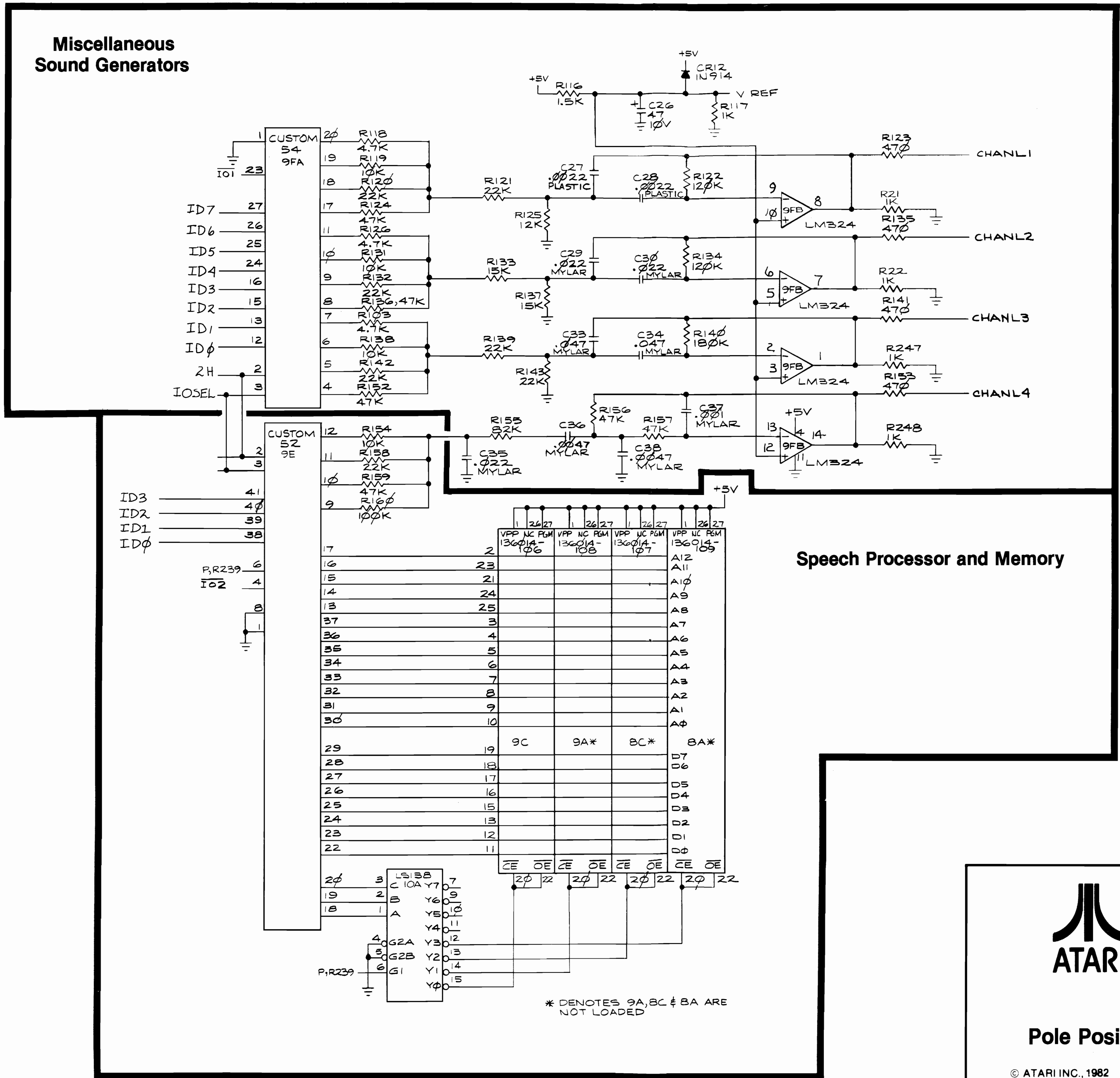
Option Switch Input and I/O Interface



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Pole Position CPU PCB Schematic Diagram

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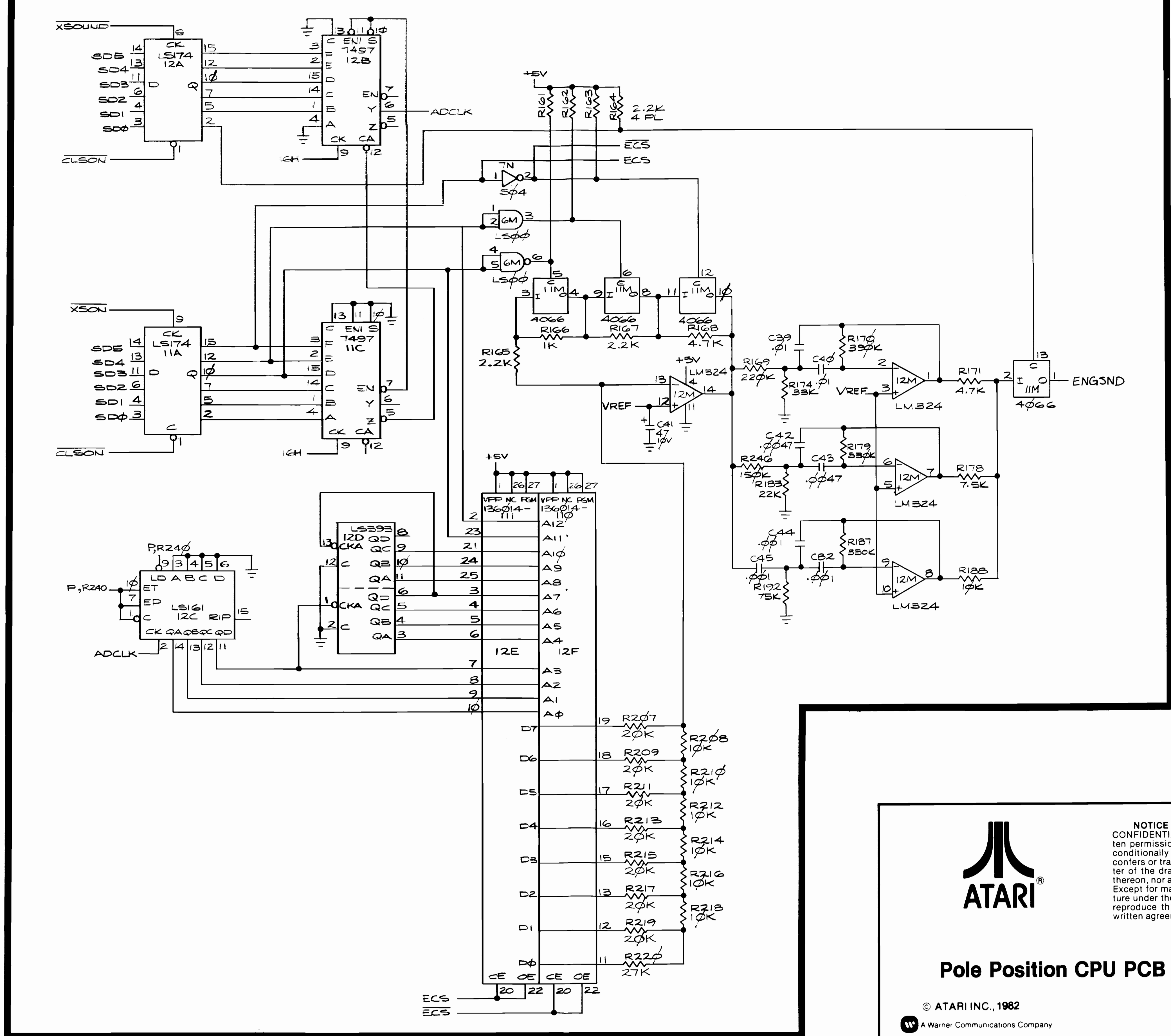
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Pole Position CPU PCB Schematic Diagram

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Engine Sound Generator



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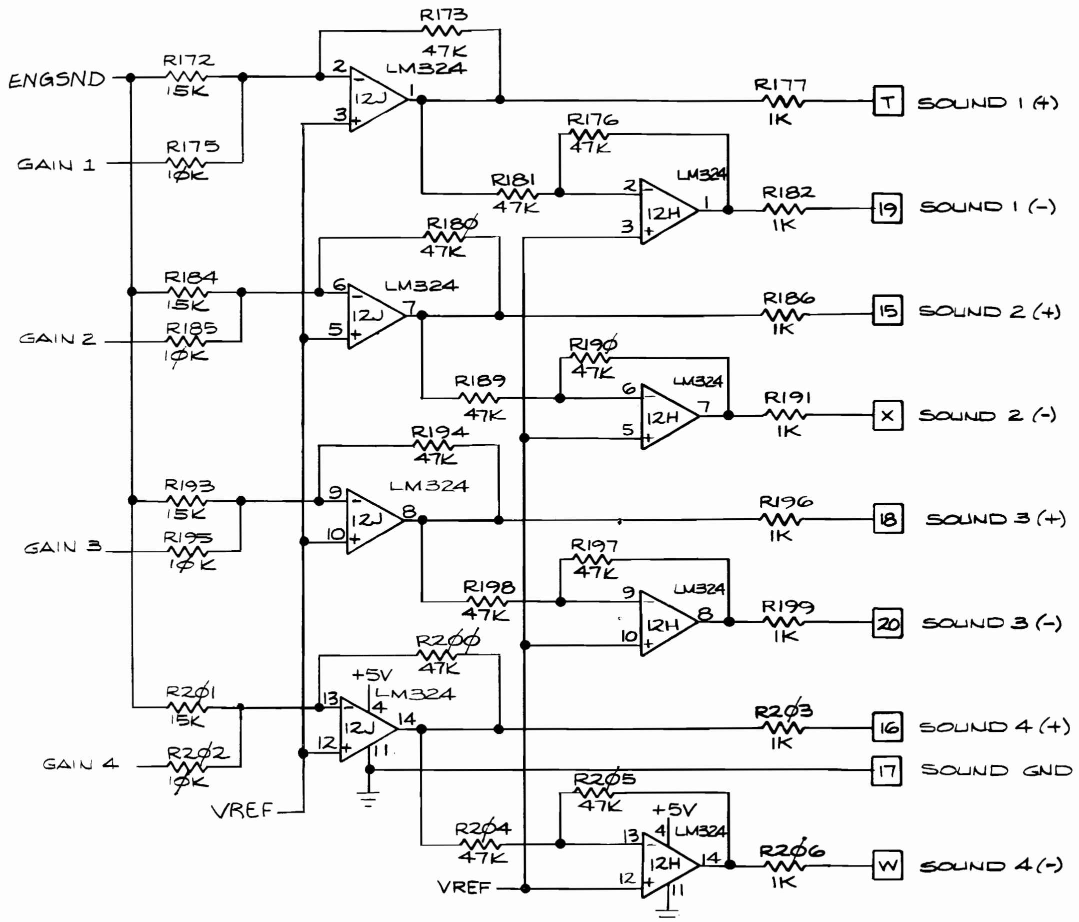
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Pole Position CPU PCB Schematic Diagram

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Sound Output

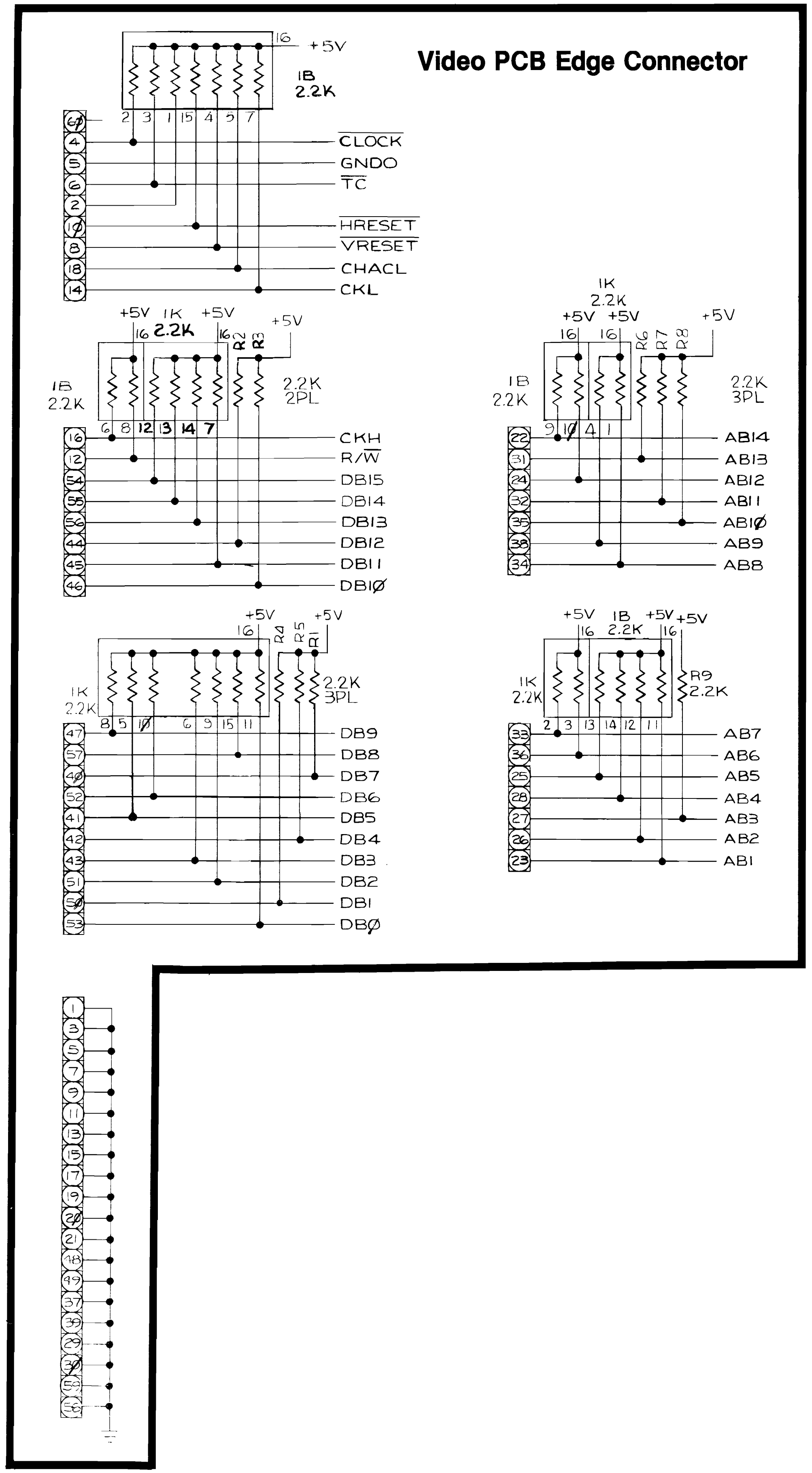


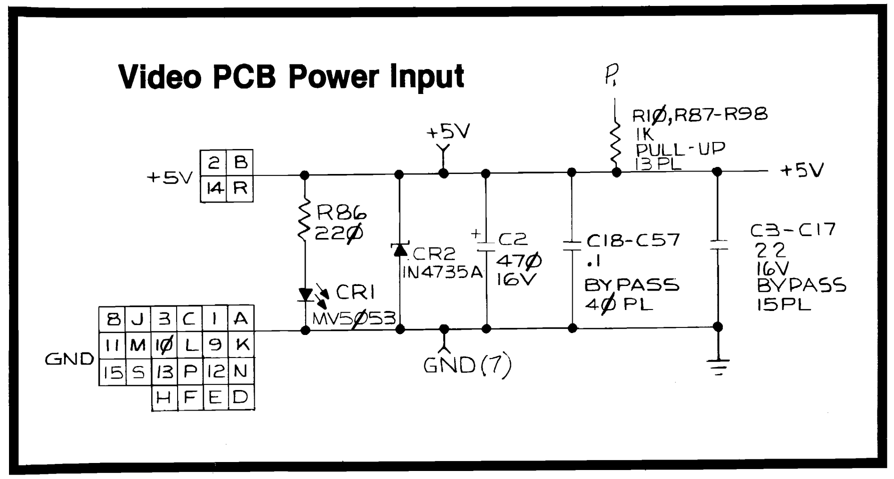
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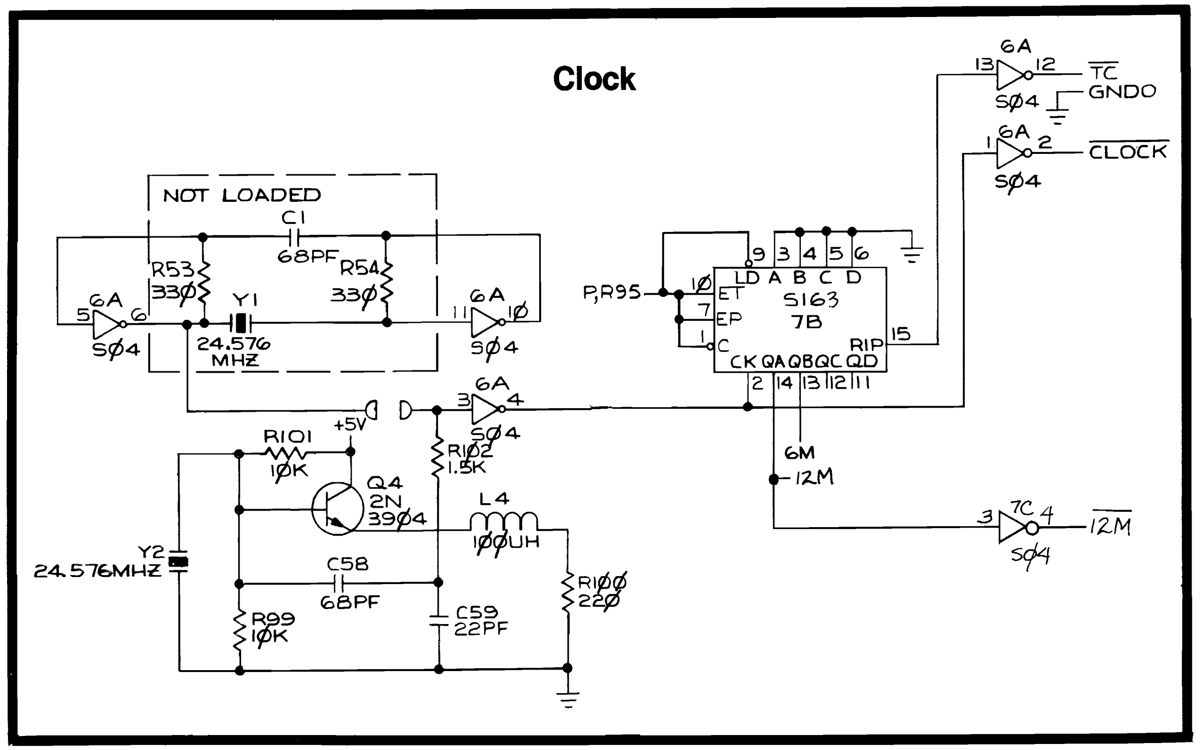
Pole Position CPU PCB Schematic Diagram

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SP-218 Sheet 10A
4th printing





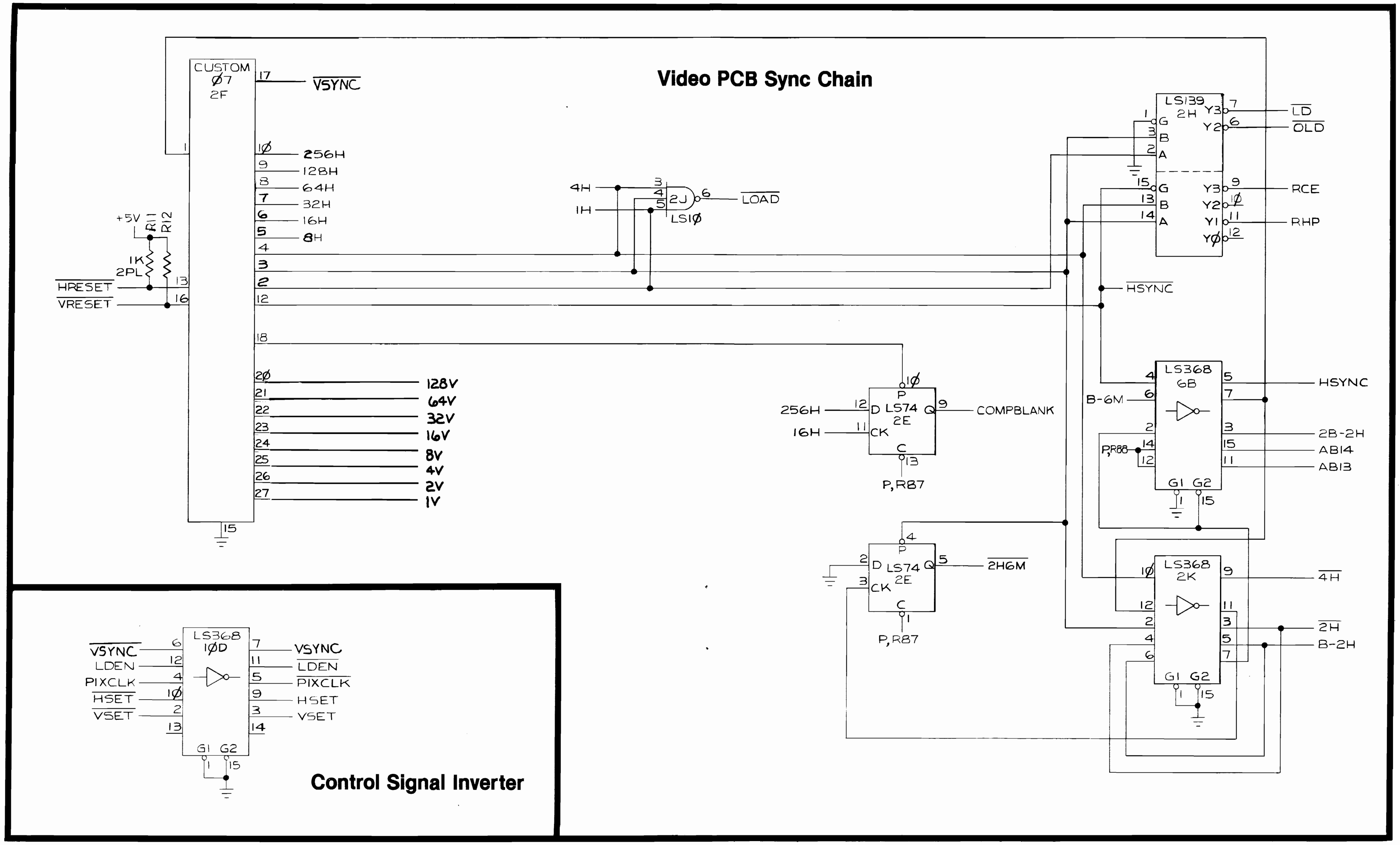


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Pole Position Video PCB Schematic Diagram

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SP-218 Sheet 10B
4th printing



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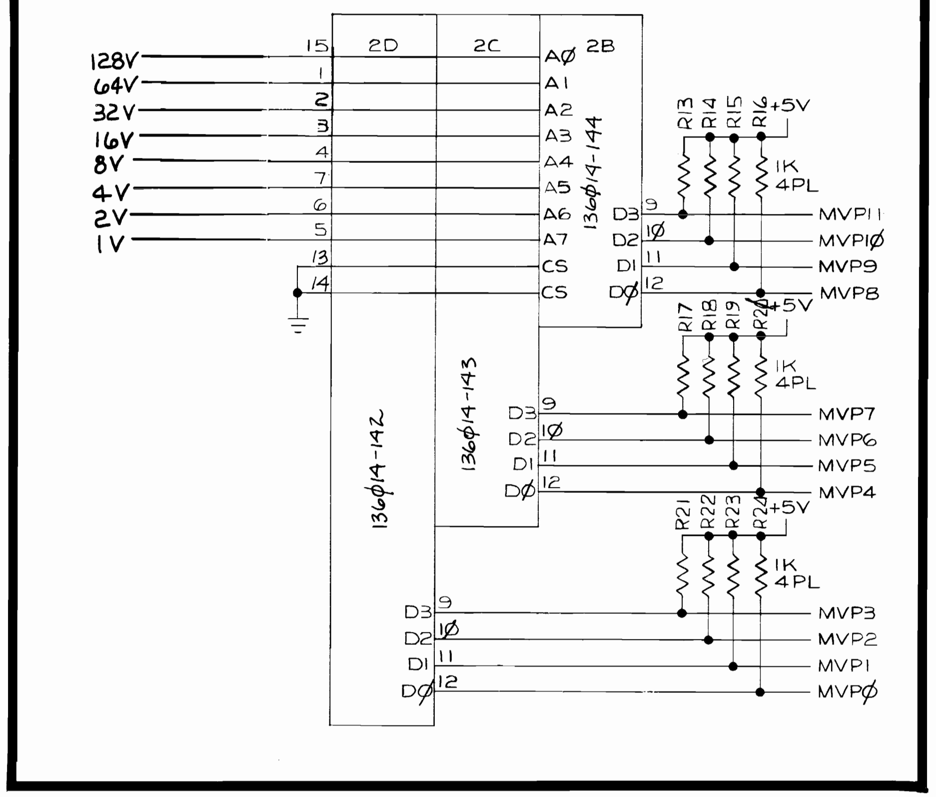
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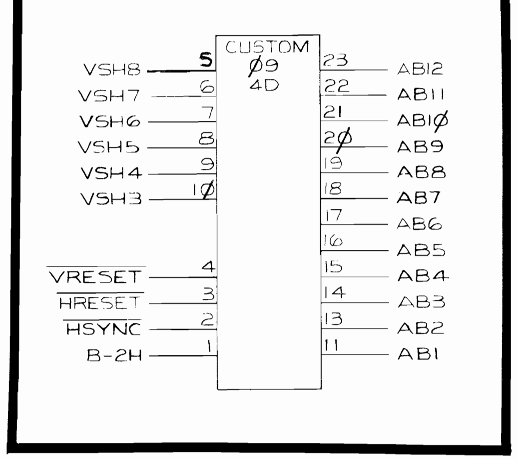
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SP-218 Sheet 11A
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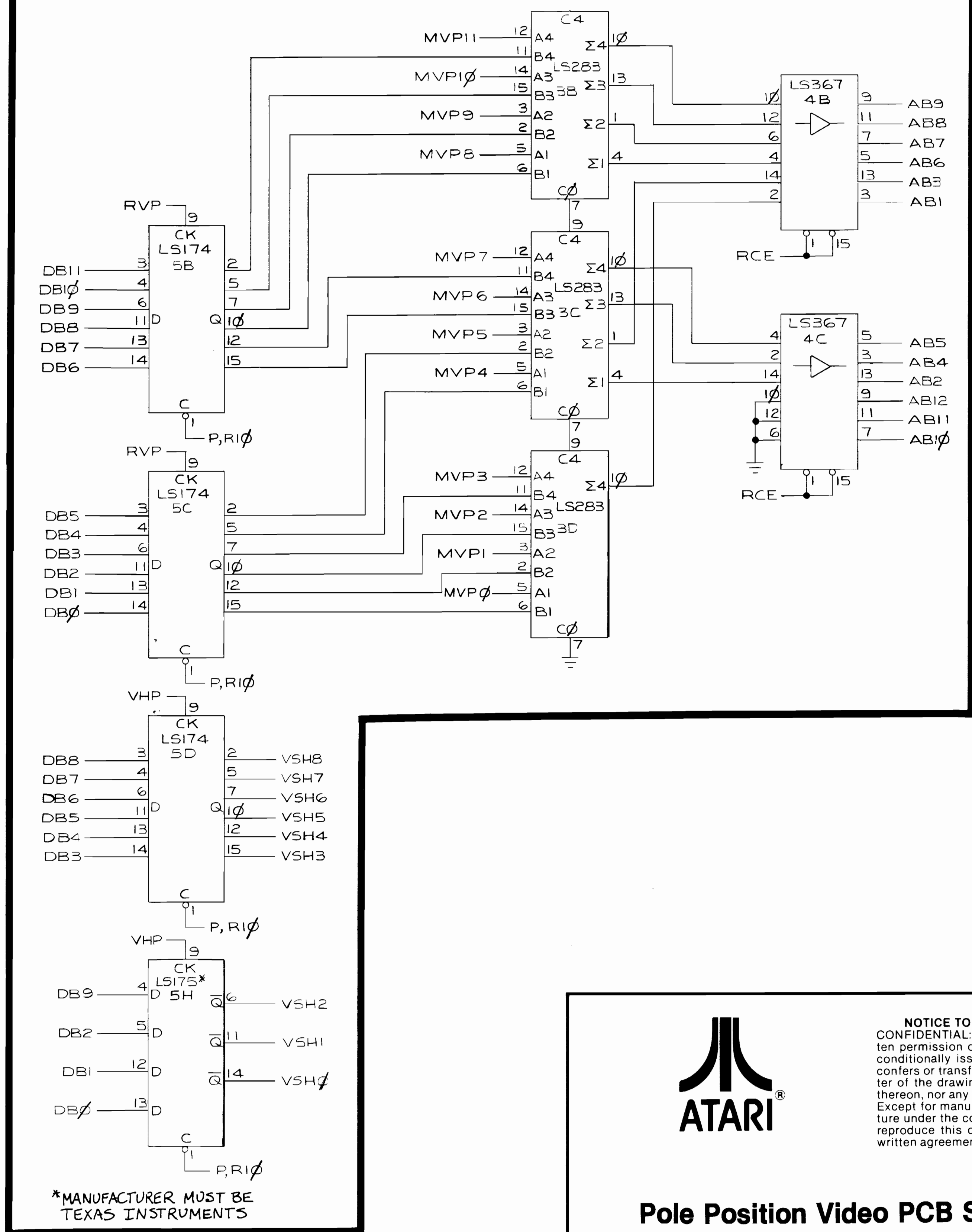
Vertical Position Modifiers



Address Bus Interface



Vertical Position Buffers and Adders



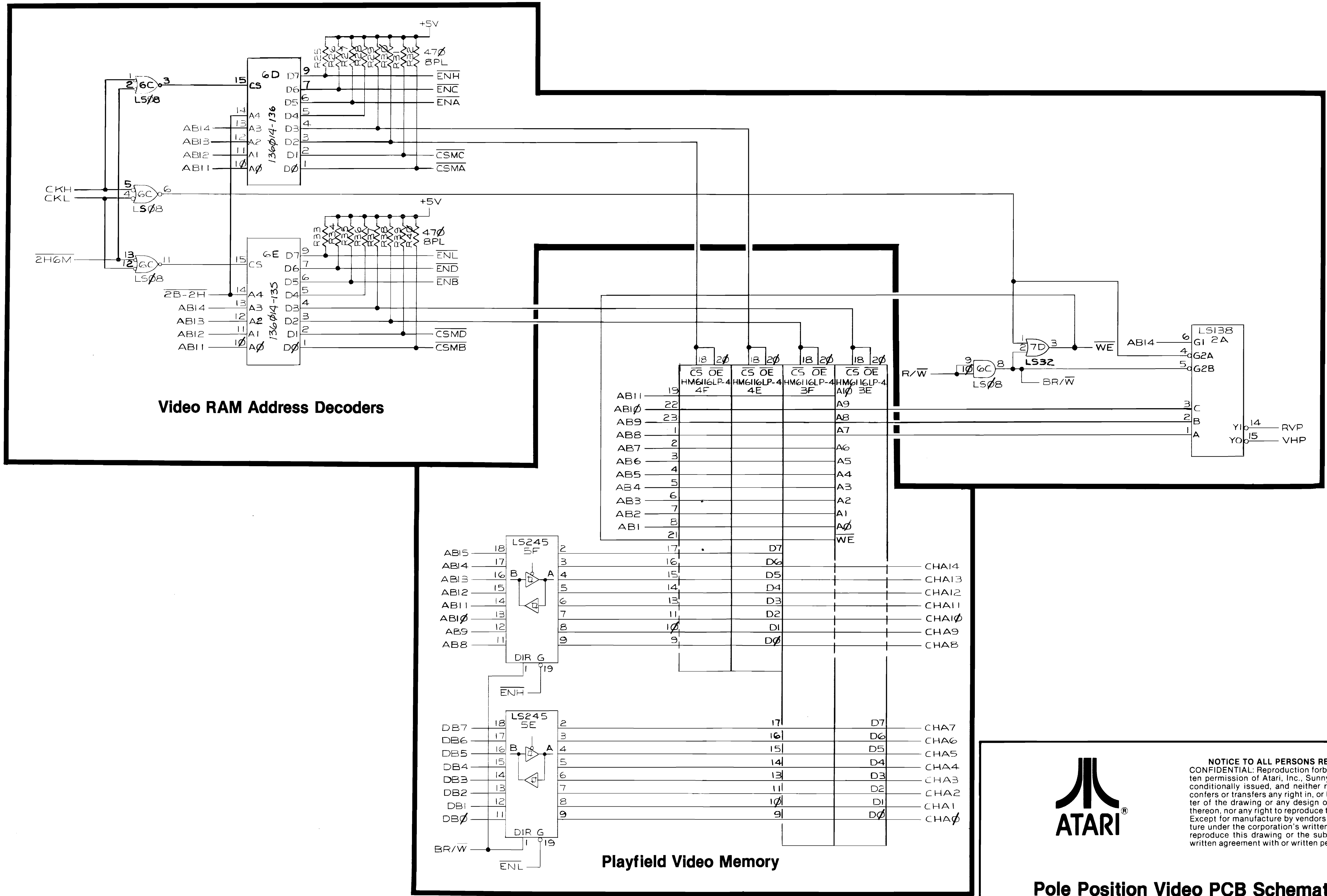
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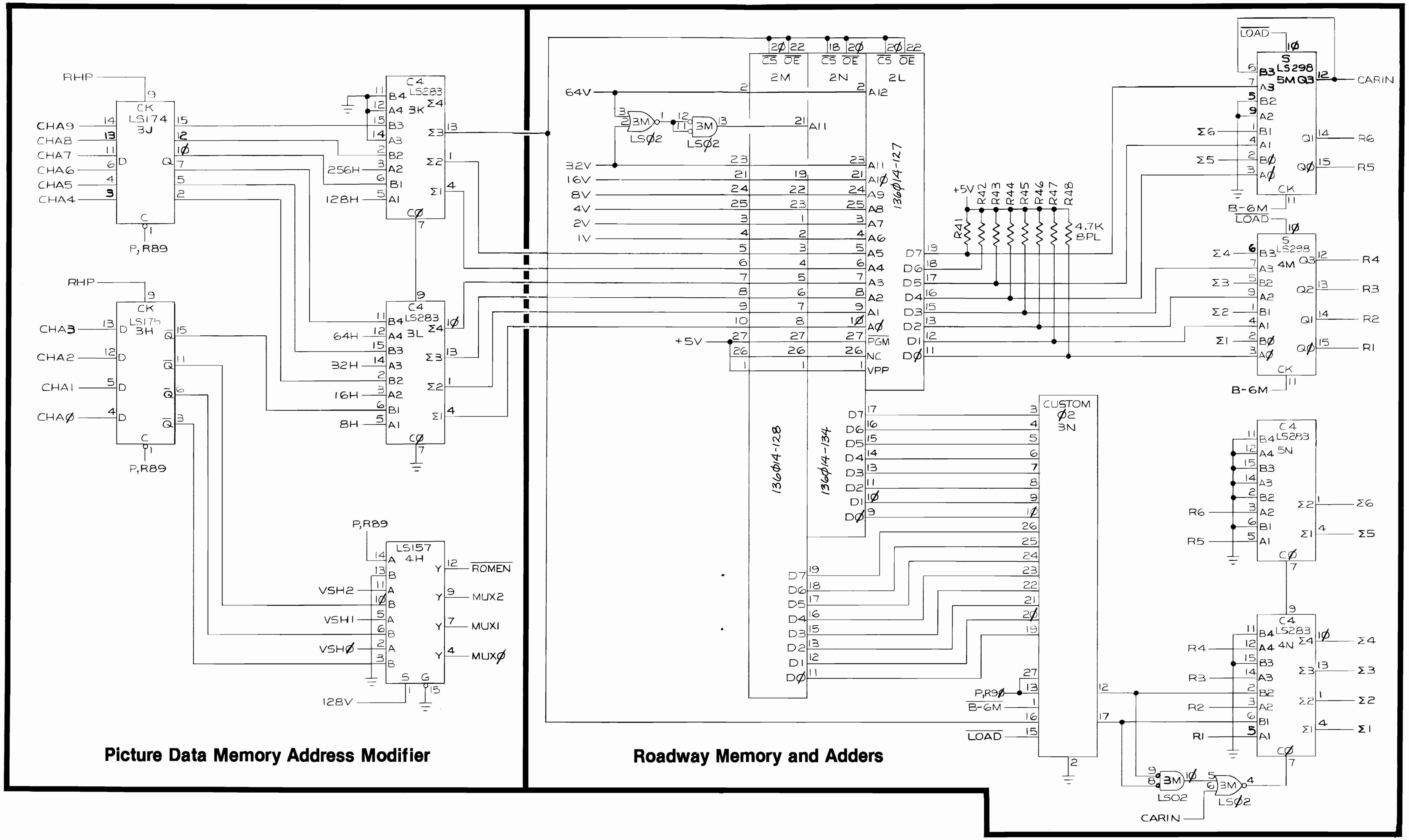
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Pole Position Video PCB Schematic Diagram

SP-218 Sheet 12A
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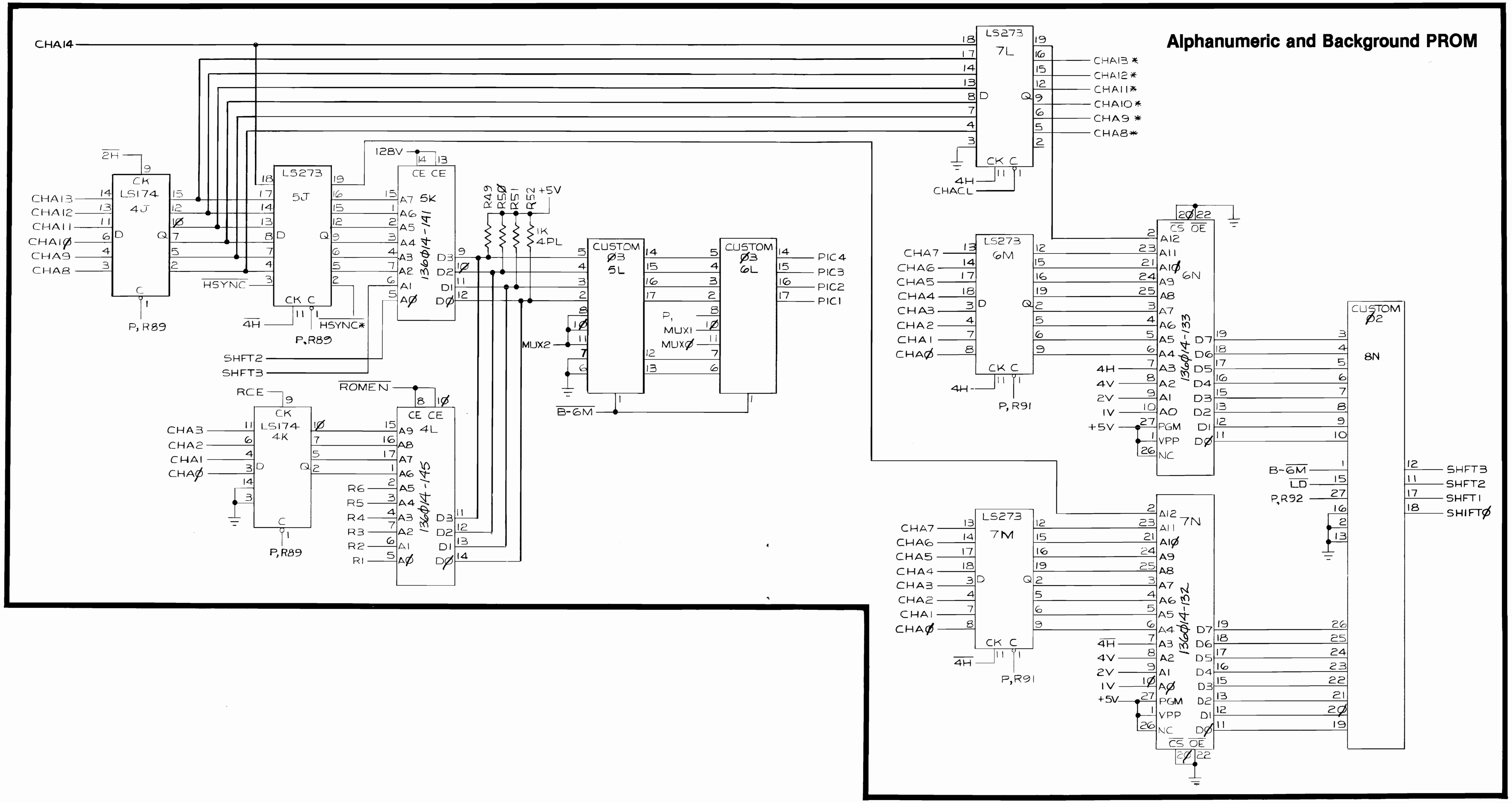
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Pole Position Video PCB Schematic Diagram

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Alphanumeric and Background PROM



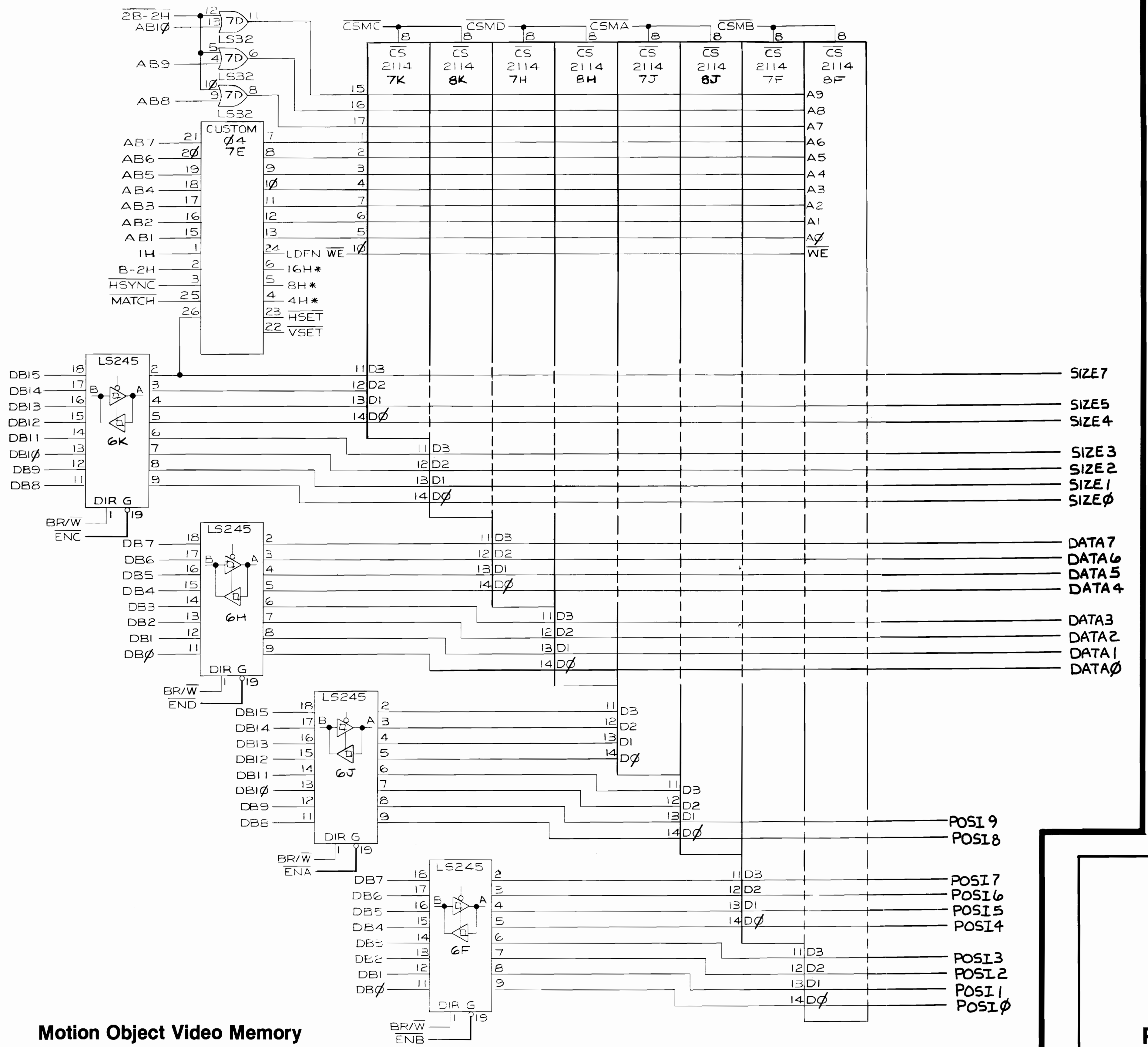
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Pole Position Video PCB Schematic Diagram

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Motion Object Video Memory

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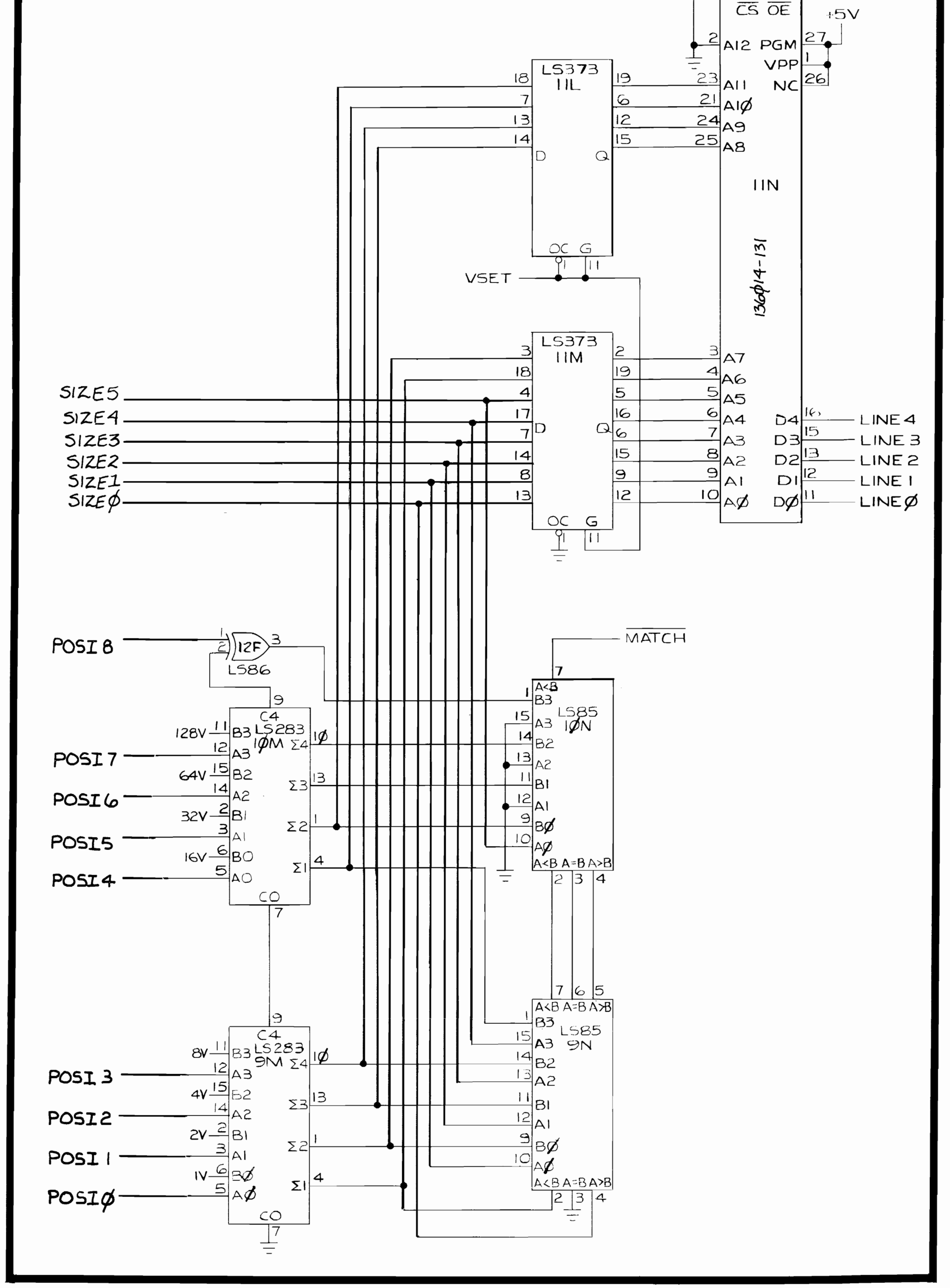
Pole Position Video PCB Schematic Diagram

SP-218 Sheet 13B

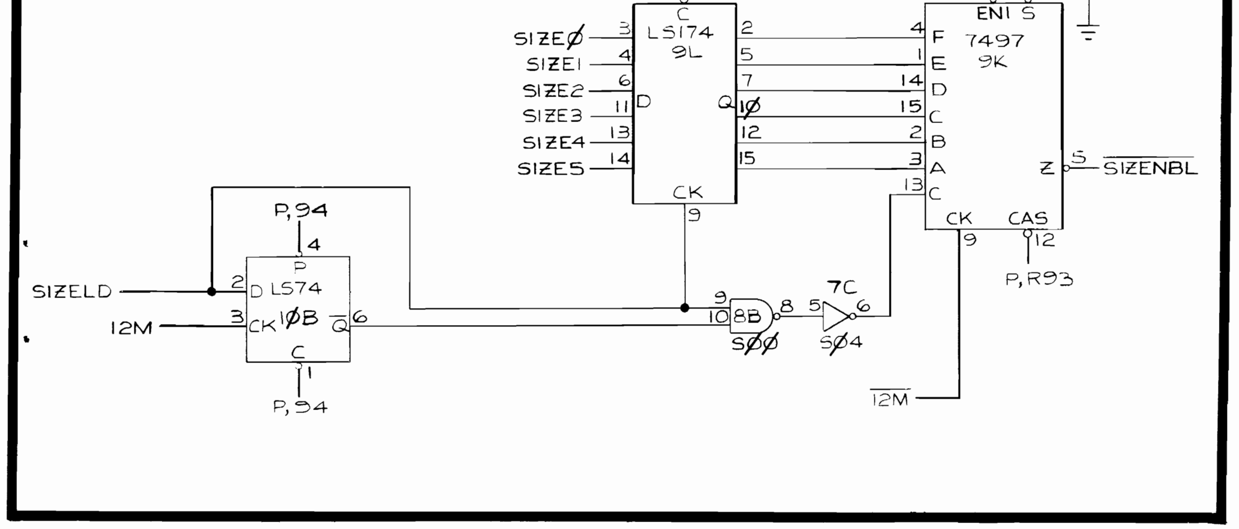
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Match Circuit



Size Clock-Rate Generator



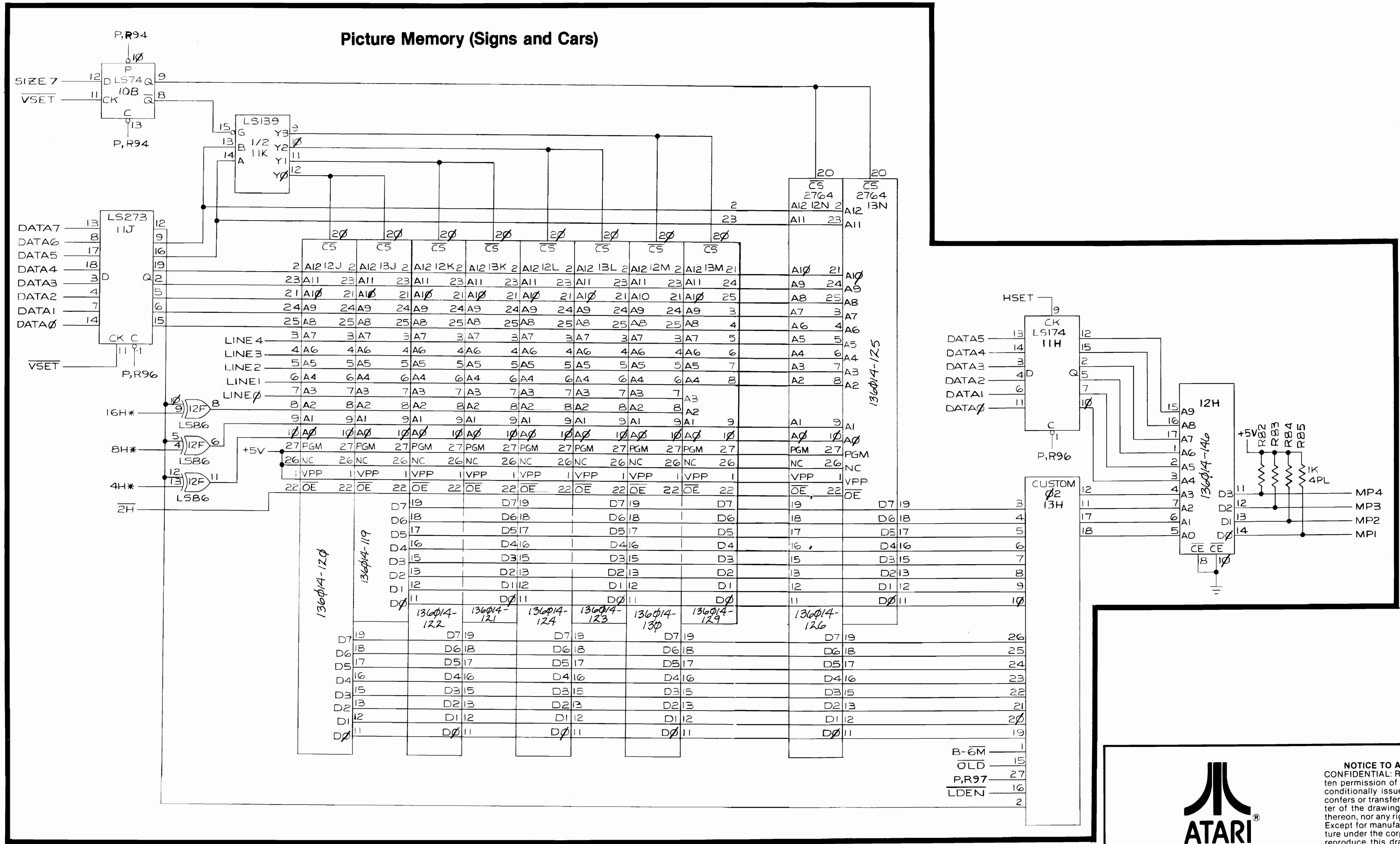
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Pole Position Video PCB Schematic Diagram

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Picture Memory (Signs and Cars)

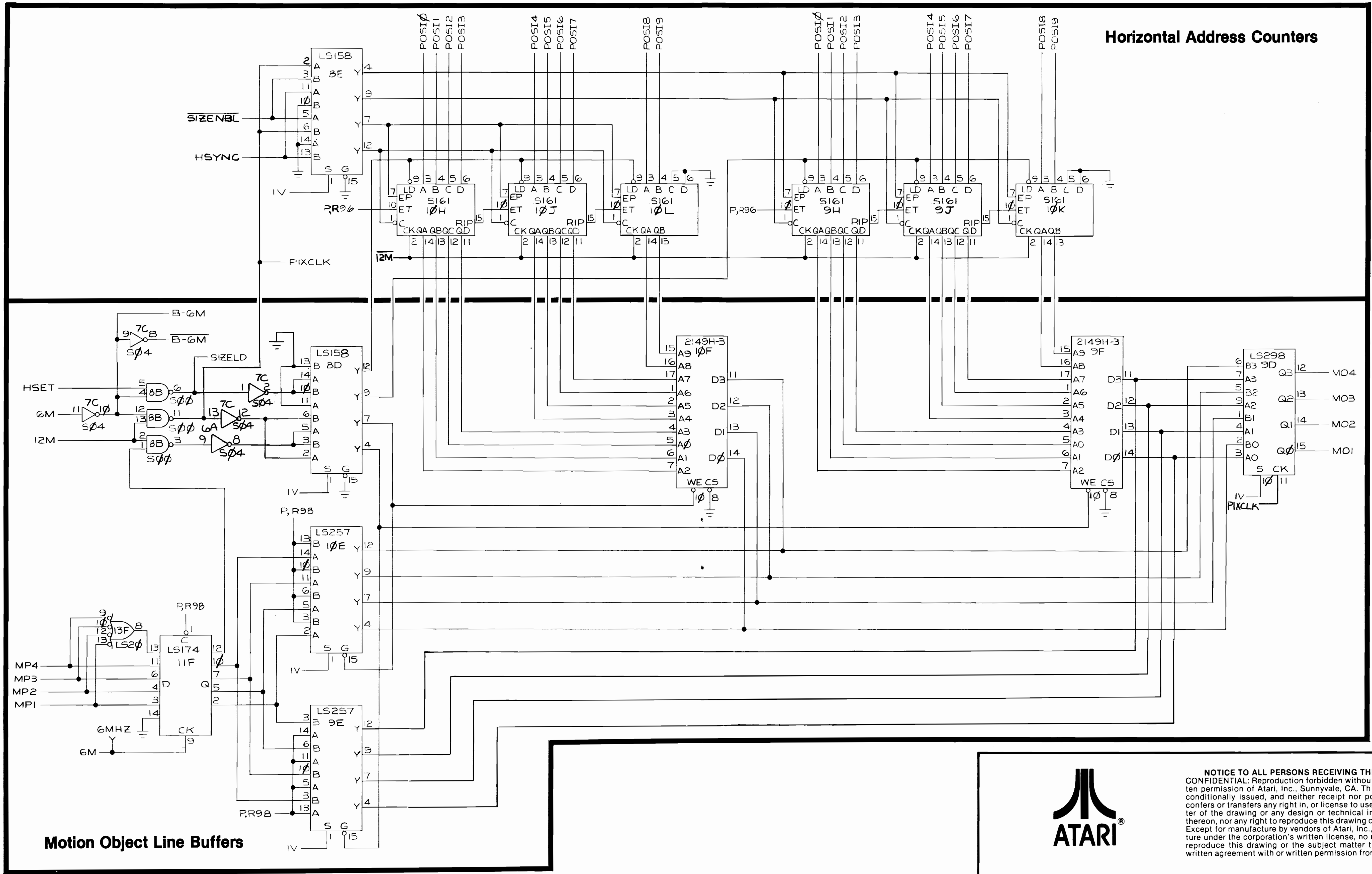


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Pole Position Video PCB Schematic Diagram

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SP-218 Sheet 14B
4th printing

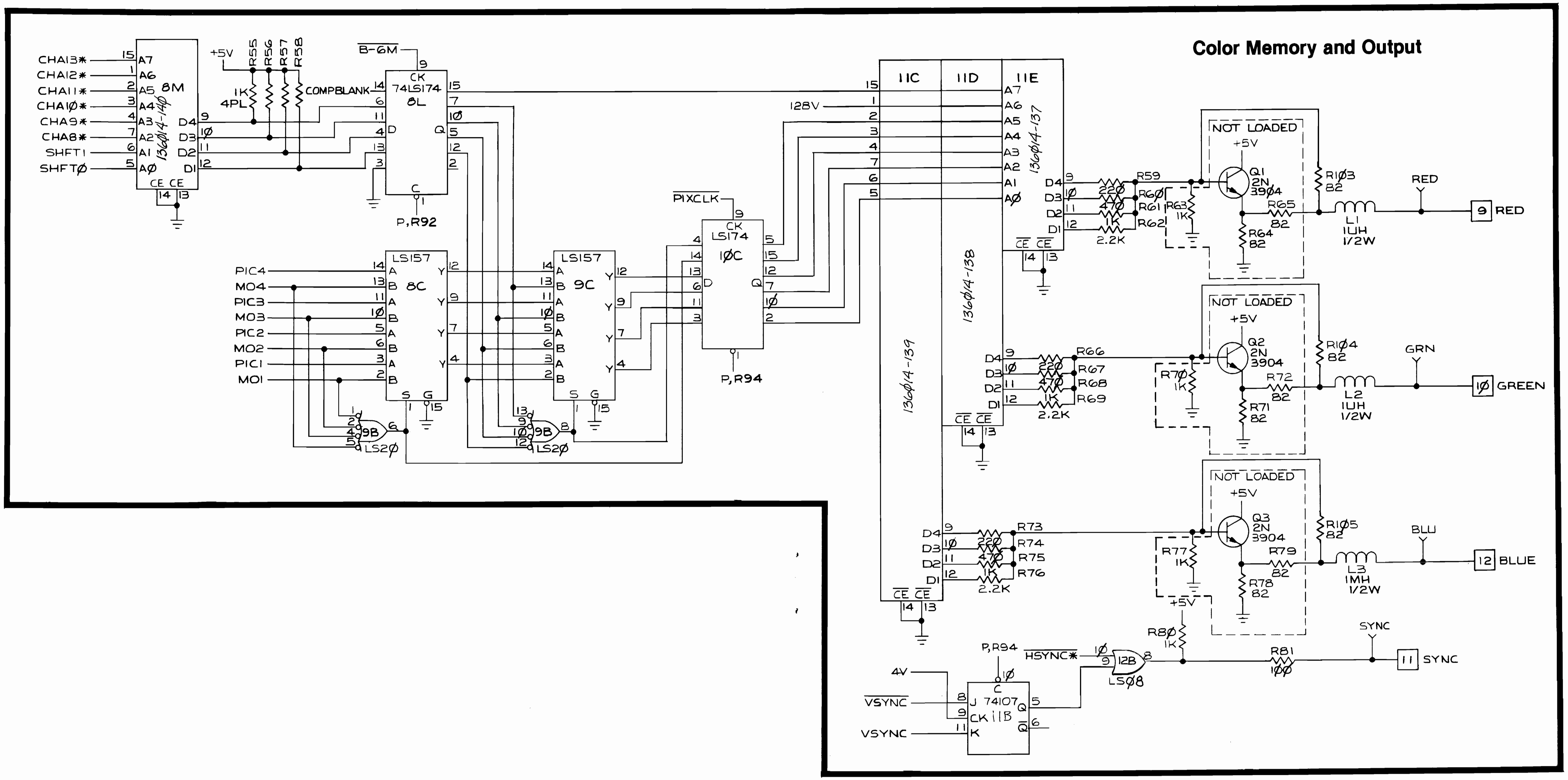


Pole Position Video PCB Schematic Diagram

SP-218 Sheet 15A

4th printing

Color Memory and Output



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Pole Position Video PCB Schematic Diagram

A Warner Communications Company

SP-218 Sheet 15B
4th printing

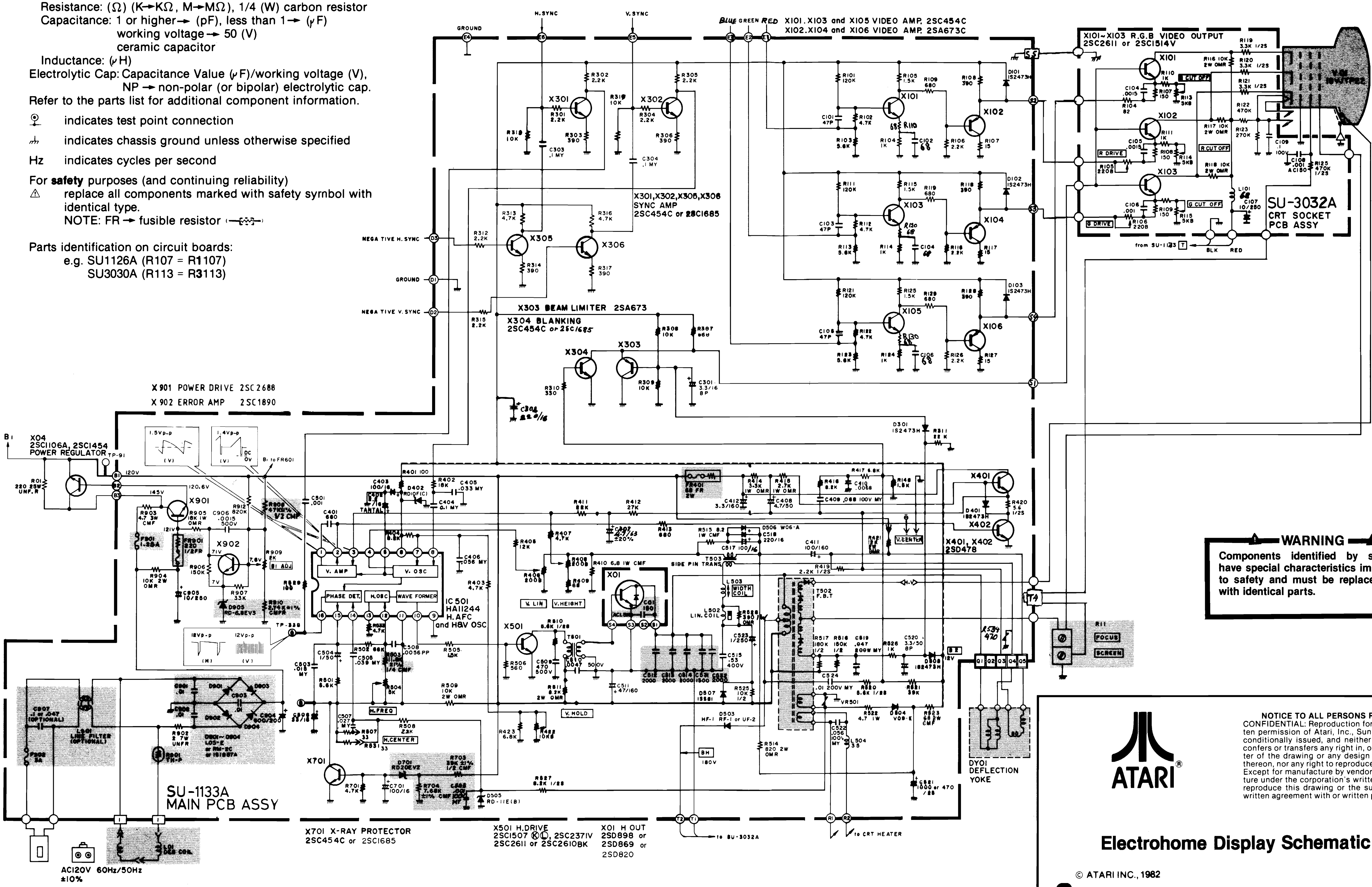
Schematic Notes
Unless otherwise specified
Resistance: (Ω) (K→KΩ, M→MΩ), 1/4 (W) carbon resistor
Capacitance: 1 or higher→ (pF), less than 1→ (μF)
working voltage→ 50 (V)
ceramic capacitor
Inductance: (μH)
Electrolytic Cap: Capacitance Value (μF)/working voltage (V),
NP → non-polar (or bipolar) electrolytic cap.
Refer to the parts list for additional component information.

- (test point symbol) indicates test point connection
- (chassis ground symbol) indicates chassis ground unless otherwise specified
- Hz indicates cycles per second

For **safety** purposes (and continuing reliability)
⚠ replace all components marked with safety symbol with identical type.
NOTE: FR → fusible resistor

Parts identification on circuit boards:
e.g. SU1126A (R107 = R1107)
SU3030A (R113 = R3113)

Electrohome 19-Inch Color Raster-Scan Video Display Schematic Diagram



⚠ WARNING ⚠
Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.

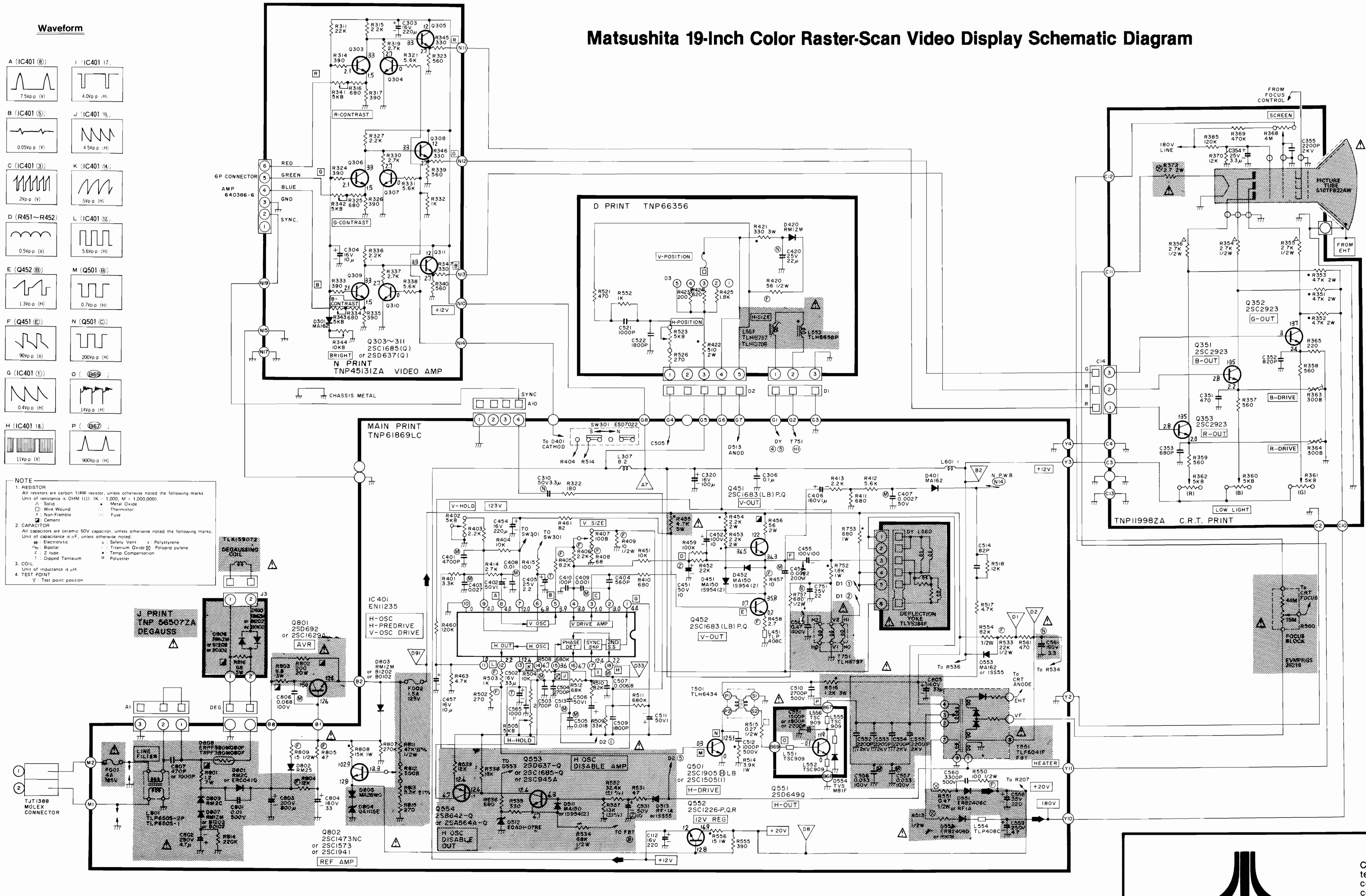
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Electrohome Display Schematic Diagram

SP-218 Sheet 16A
4th printing

Matsushita 19-Inch Color Raster-Scan Video Display Schematic Diagram



WARNING

Components identified by shading have special characteristics important to safety and must be replaced only with identical parts.

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Matsushita Display Schematic Diagram

A Warner Communications Company

SP-218 Sheet 16B
4th printing